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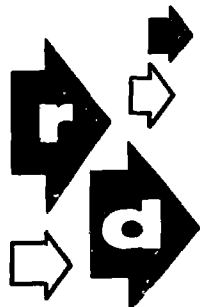
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## ABSTRACT

This twenty-third annual NEA survey of public school teacher supply and demand estimates that the supply of qualified teachers is adequate. To supplement these estimates, special surveys were made in State departments of education and in the nation's 67 largest school systems to assess teacher supply and demand in various types of school systems. By late summer 1970, most States had reported shortages of applicants in some areas and excesses in others. Shortages occurred in elementary school librarians, special education, industrial arts, remedial reading, speech correction, mathematics, and women's physical and health education. As a result of the record size of the graduating class, only five States reported having a smaller number of qualified teacher applicants. Tables present comparative data by State and subject area. A related document is ED 040 918. (MLF)

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RESEARCH REPORT 1970-R14

## Teacher Supply and Demand in Public Schools, 1970

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Research Report 1970-R14: *TEACHER SUPPLY AND DEMAND IN PUBLIC SCHOOLS, 1970*

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## CONTENTS

Foreword .....	4
Highlights .....	5
Special Surveys of Teacher Supply and Demand .....	6
The Supply of New Teachers .....	8
Brief Overview of Major Sources of Supply .....	8
The New Supply of College Graduates Prepared To Teach .....	13
Occupation of Teacher Education Graduates in 1969 .....	21
The Demand for New Teachers .....	28
Difference Between Demand for New and Demand for Beginning Teachers .....	28
Criteria for Estimating Demand for New Teachers .....	28
Characteristics of Demand for New Teachers as Suggested by Assignments in Selected States .....	33
Supply Compared with Demand for New Teachers .....	41
Supply of Graduates Compared with Demand .....	41
Trends in Supply and Demand in Reporting States .....	43
Supply of Beginning Teachers Compared with Total Number of Teachers Employed .....	43
Supply of New Teachers Compared with Demand (QCE) .....	43
Supply Compared with Demand (ATCE) for Beginning Teachers .....	43
Summary of Comparisons Between Estimates of Teacher Supply and Demand .....	49
Supply and Demand for School Librarians and Guidance Counselors .....	51
Education Completed by Public-School Teachers .....	52
Trends in Academic Preparation Completed .....	52
Differences Among the States .....	52
Preparation of New Teachers .....	53
Appendix .....	56

## FOREWORD

THE NEA RESEARCH DIVISION constantly endeavors to improve the research techniques, the accuracy of data, the scope of information collected, and the usefulness of its reports. This 23rd annual survey of the supply and demand for public-school teachers continues this tradition.

Continuing the changes initiated in the 1966 edition, the 1970 report provides two estimates of the demand for new teachers: one based on achievement of minimum quality in educational staffing, and one based on trends toward improvement in the quality of the teaching staff. Also, the present study continues the estimation of the demand for beginning teachers as a subgroup of the demand for new teachers.

Users of this report should interpret the estimates only in general terms because additional study is needed on (a) the factors influencing personal decisions on entering, interrupting, re-entering, and leaving the teaching profession; (b) the characteristics of potential teachers and the assignments given to new teachers; and (c) the influence of rapid advances toward improvement in education upon the components of teacher supply and demand.

This report contains a summary of teacher supply and demand conditions reported in late summer 1970 by respondents in state departments of education and in the country's 67 largest school systems. These two special surveys were designed to supplement the national estimates, to identify the status of teacher supply and demand in various types of school systems, and to review the conditions influencing teacher supply and demand in late summer 1970. The results of these inquiries are given on pages six and seven of this report.

The NEA Research Division appreciates the invaluable assistance of the personnel in state departments of education and teacher preparation institutions who participated in this study. Their willingness to gather and provide basic data and their continuing interest in this important facet of professional analysis and planning make this report possible. The Division also wishes to thank the state and local school officials who so willingly responded to the supplemental inquiries on the shortage of teachers.

This report was prepared by William S. Graybeal, Assistant Director, with the assistance of the Statistics Section of the Research Division.

GLEN ROBINSON  
Director, Research Division

## HIGHLIGHTS

- A record 301,027 persons completed teacher preparation programs with at least a bachelor's degree between September 1969 and August 31, 1970, an increase of 9.5 percent over the number reported for the previous year.
- The estimated number of new teachers needed to attain minimum levels of quality staffing (Quality Criterion Estimate of teacher demand) in 1970 comprises 255,350 in elementary schools and 191,150 in secondary schools, a total of 446,500.
- The number of new teachers needed in 1970-71, as projected from trends in the improvement of staffing characteristics in recent years (Adjusted Trend Criterion Estimate), comprises 95,800 in elementary schools and 105,300 in secondary schools, a total of 201,100.
- The Quality Criterion Estimate of demand exceeds the expected supply of new teachers by 157,150, provided the turnover and re-entry rates of qualified experienced teachers approximates that of recent years. This shortage comprises 121,950 teachers at the elementary-school level and 35,200 at the secondary-school level.
- Based on the Adjusted Trend Criterion Estimate of demand, with allowance for the re-entry of qualified experienced teachers as in 1969-70, the supply is generally adequate, but shortages of beginning teachers are expected to continue in secondary-school mathematics, special education, vocational-technical courses, industrial arts, and some secondary-school sciences.
- Two special surveys of appropriate officials in state departments of education and in 67 of the largest school systems in late summer 1970 show that as a whole the supply is adequate but shortages of qualified teachers are continuing in all of the assignments listed above.
- As a result of the record size of the graduating class, only five states reported having a smaller number of qualified teacher applicants, with the following most frequently identified as contributing to the lower supply: location of vacancies not attractive, greater opportunities in business and industry, salaries and benefits not attractive, and federal programs. Among eight states reporting increased demand for qualified teachers this year the major factors contributing to this condition were added curricular offerings in five states, increased school enrollment in four states, reduction in class size in three states, new positions related to federal programs in three states, and larger number of teachers not returning to their positions in two states.

## SPECIAL SURVEYS OF TEACHER SUPPLY AND DEMAND

TWO SPECIAL SURVEYS were conducted in mid-summer 1970 to obtain up-to-date information about (a) the direction of change, if any, in the factors which influence the supply and demand for public-school teachers; (b) the general status of supply-demand conditions in the states and major cities; (c) the subject areas in which shortages seem to be most widespread; and (d) conditions in the fall of 1970 as compared with one year earlier. This information provides a framework for interpreting the projections of teacher supply and demand in the regular study.

One survey was directed to the person having responsibility for teacher education and certification in each state department of education. These persons were asked to report their general impression of teacher supply and demand conditions in their state as of the last week in July. The second survey was sent to the 81 largest school systems (these systems enroll 50,000 or more pupils, and as a group employ one-fifth of all public-school teachers). Personnel directors in these systems were asked to report by each major assignment area: (a) the extent of difficulty they have encountered in filling teaching positions for 1970-71, (b) whether they have had to employ persons with substandard qualifications, and (c) the number of unfilled positions in the last week of July 1970.

### General Conditions Reported by States

State department of education officials in 49 states were able to report the general condition of public-school teacher supply and demand this summer. Their assessment of how the total number of qualified applicants compared with the number of teaching position vacancies in late July 1970 was as follows:

- 2 states--some shortage of applicants
- 35 states--shortage of applicants in some subject areas and an excess in others
- 7 states--sufficient applicants to fill positions
- 1 state--some excess of applicants
- 4 states--substantial excess of applicants.

The remaining state did not have sufficient information readily available to follow a valid appraisal of conditions as of the last week of July.

The situation regarding qualified teacher applicants in late July 1970 compared with 1969 was reported by seven states as being about the same, and by 31 states as being less acute. Eight states reported the condition to be much less acute than one year ago. One state reported the condition to be much more acute than last year and one state reported the condition to be more acute than one year ago. Two states did not have sufficient information to report. The table below shows the 5-year trend in the alleviation of shortages:

General condition of teacher supply and demand	Number of states reporting condition as of fall				
	1966	1967	1968	1969	1970
Substantial shortage of applicants ....	20	19	5	2	0
Some shortage of applicants .....	11	14	17	12	2
Shortage of applicants in some subject areas and excess in others .	8	11	19	32	35
Sufficient applicants to fill positions .....	0	1	1	1	7
Some excess of applicants .....	0	0	0	2	1
Substantial excess of applicants ....	0	0	0	0	4
Valid appraisal not possible with present information .....	11	5	8	1	1

Responding to an inquiry about conditions having unusual influence toward decreasing the supply of teachers this year, 40 states reported that the supply of qualified teacher applicants is not smaller than last year. For the five states which reported a smaller supply, the conditions having increased influence toward a small number of qualified applicants were location of vacancies not attractive in four states, location of vacancies not attractive in two states, federal programs in two states, requirements of military service in one state, and greater opportunities in business and industry in one state.

The states having a demand for new teachers greater than last year were asked to identify the factors having increased influence. For the eight states reporting increased demand the reasons include:

- 5 states--added curricular offerings
- 4 states--increased school enrollment
- 3 states--reduction in class size
- 3 states--new positions resulting from federal legislation
- 2 states--larger number of teachers not returning to their positions.

#### Shortages by Population Areas

Respondents in 44 states were able to report conditions by population areas in their state. Twenty-six reported having a shortage of applicants in rural areas; six reported a shortage in small cities; four, a shortage in central cities of large urban centers; and none reported a shortage in suburban areas. The numbers of states reporting conditions in these population areas as being more acute than observed last year were two states, in rural areas; two states, in small cities; two states, in central cities of large urban centers; and one state, in suburban areas.

The second survey queried personnel officers in each of the 81 largest school systems about teacher supply and demand conditions in their systems as of the last week in July. Sixty-seven systems reported a total of 2,314 unfilled positions. The unfilled positions represent 0.6 percent of the teachers in these systems in fall 1969.

The following shows the trend toward improvement in the supply of teachers in the reporting large school systems:

Year	Number of systems reporting	Number of positions open in late July	Percent of total teaching positions represented by vacant positions
1967 .	57	7,843	2.4%
1968 .	76	5,482	1.6
1969 .	76	4,013	1.0
1970 .	67	2,314	0.6

#### Shortages by Teaching Assignment Area

According to state department of education personnel, many school systems are encountering extreme difficulty in filling teaching positions for 1970-71 in the following assignments (most frequently listed by 49 states reporting this

information): elementary-school librarians, 26 states; special education, 20 states; industrial arts, 19 states; special assignments in remedial reading, speech correction, etc., 16 states; special assignments directed to educationally disadvantaged children, nine states; women teachers of physical and health education, nine states; and mathematics, eight states. The most frequently listed assignment areas in which the 49 states expect school systems generally will have to employ persons with substandard qualifications are special education, 21 states; industrial arts, 11 states; elementary-school librarians, 10 states; trade-industrial-vocational-technical subjects, eight states; guidance counselors, eight states; special assignments in remedial reading, speech correction, etc., eight states; mathematics, seven states; and natural and physical sciences, seven states.

The assignments identified in the annual national survey as having an inadequate supply of teachers are also reported as being in short supply by significant numbers of large school systems. The most frequently identified assignments these 67 school systems report having extreme difficulty in filling and the assignments having the largest numbers of unfilled positions in late July are as follows:

<u>Assignment</u>	<u>Number of systems having EXTREME DIFFICULTY in filling positions</u>	<u>Number of positions not filled</u>
Industrial arts .....	24	227
Special education .....	14	384
Mathematics .....	13	367
Trade, industrial, vocational .....	6	42
Natural and physical sciences .....	4	117
Physical education (women) .....	5	228
Remedial reading, speech etc. ....	6	107
Elementary, regular instruction .....	2	334

Supporting these reports of shortages are the relatively large numbers of these 67 large school systems which report they have had to employ persons with substandard qualifications in these assignment areas for 1970-71: nine, industrial arts; 12, special education; 10, mathematics; five, trade-industrial-vocational-technical courses; seven, natural and physical sciences; six, remedial reading and speech correction; and five, regular instruction in elementary grades.



## THE SUPPLY OF NEW TEACHERS

MOST OF THE QUALIFIED new teachers are supplied from the following sources: (a) graduates currently completing teacher education programs, (b) former teachers currently interested in re-entering classroom teaching, and (c) teacher education graduates of previous years currently interested in entering the profession for the first time. The small remaining portion of the supply of new teachers comes from the pool of qualified teachers who have been assigned to nonteaching positions in the public schools, or have been teaching in higher education, and the pool of persons who have obtained through experience and specialized training the skills which will allow their placement in certain teaching positions, at least on a temporary basis.

The major objective of this section is to review the new supply of persons currently completing teacher education programs. The size of the pools of qualified persons who may enter teaching positions is estimated. However, it is difficult to identify the extent to which persons from these sources may be interested in and acceptable for employment.

### Brief Overview of Major Sources of Supply

#### College Graduates Completing Teacher Education Programs in 1970

The summary provided in Table 1 shows there are expected to be 114,390 prospective elementary-school teachers and 167,802 prospective secondary-school teachers who will be completing their preparation with at least a bachelor's degree in time for entry into the teaching profession at the beginning of the 1970-71 session. Also, 8,275 prospective teachers of special education, 2,167 school librarians, and 3,945 guidance counselors are expected to be completing their professional preparation. (At least 4,448 additional persons are expected to have completed preparation for employment as school psychologists, school social workers, school nurses, or other supporting positions.)

Not all persons in this gross supply of new teachers will be available for immediate entry into classrooms. The proportions of teacher

education graduates, for whom follow-up information is available, who actually enter active teaching status during the subsequent session have ranged from 74.1 to 83.2 percent for elementary- and 62.3 to 69.2 percent for high-school teachers during the past 10 years. Applying the rate of entry during a period when positions were widely available provides an estimate of about 98,280 elementary- and 128,960 high-school teachers who may be available to enter the profession from this source in the fall of 1970.

#### Qualified Former Teachers

Some of the teachers who leave their positions may be expected to return to the profession. In addition to many teachers on leaves of absence, a significant number of teachers return to the classroom following widely varied lengths of interruptions. A survey conducted by the NEA Research Division in 1959-60 noted that 44.1 percent of the public-school teachers had interrupted their careers since beginning teaching. The mean length of interruption was 8.3 years. About 7.5 percent of the teachers had interrupted their careers for longer than 15 years. As may be expected, interruption in their teaching careers was much more widespread among married women teachers (61.1 percent) than among either single women teachers (24.4 percent) or men teachers (24.0 percent). Only 37.8 percent of teachers in a similar study in 1965-66 reported having interrupted their careers since beginning teaching. Interruption continued to be more widespread among married women teachers (53.5 percent) than among single women teachers (15.7 percent) or men teachers (19.5 percent).

The pool of former teachers below the college level who had completed four years of college and were unemployed in 1960 was estimated by the U. S. Bureau of the Census to comprise about 304,460 persons. Problems of definition of teacher, particularly in the vocational areas, by the census enumerators make this a very general estimate. Almost 40,000 of the persons enumerated in this pool were age 65 or more; 11,900 were between ages 60 and 64. An assumption that this pool contains the 20-year accumulation of about 1.5 percent of the teachers each year suggests that this reserve has increased to about 422,200 persons during the past eight years. However, the change in

TABLE 14. -- COLLEGE STUDENTS COMPLETING BACHELOR'S DEGREE, 1970 AND 1969, BY FIELD

LINE NO	TYPE OF PREPARATION	MEN	1970 WOMEN	TOTAL	MEN	1969 WOMEN	TOTAL	1969 TO 1970 NET CHANGE	PERCENT CHANGE
1	2	3	4	5	6	7	8	9	10
1	ELEMENTARY-SCHOOL TOTAL .....	10,430	90,974	102,175	9,352	87,706	97,295	+ 4,880	+ 5.0
1	REGULAR INSTRUCTION .....	9,187	88,301	98,174	8,291	85,288	93,802	+ 4,372	+ 4.7
	SELECTED SUBJECTS(TOTAL) .....	1,243	2,673	4,001	1,061	2,418	3,493	+ 508	+ 14.5
2	ART .....	178	894	1,085	159	781	952	+ 133	+ 14.0
3	FOREIGN LANGUAGES .....	21	294	315	22	250	272	+ 43	+ 15.8
4	MUSIC .....	380	817	1,199	345	814	1,161	+ 38	+ 3.3
5	PHYSICAL & HEALTH EDUCATION ...	664	668	1,402	535	573	1,108	+ 294	+ 26.5
	SECONDARY SCHOOL								
6	AGRICULTURE .....	1,504	164	1,668	1,285	21	1,306	+ 362	+ 27.7
7	ART .....	1,874	4,583	6,466	1,585	3,907	5,498	+ 968	+ 17.6
8	BUSINESS EDUCATION .....	2,966	6,817	9,783	2,476	6,222	8,698	+ 1,085	+ 12.5
9	DISTRIBUTIVE EDUCATION .....	340	145	485	320	81	402	+ 83	+ 20.6
10	ENGLISH LANGUAGE ARTS(TOTAL) ....	7,161	21,952	29,281	5,869	20,303	26,269	+ 3,012	+ 11.5
11	ENGLISH .....	5,650	18,869	24,682	4,692	17,727	22,511	+ 2,171	+ 9.6
12	JOURNALISM .....	133	349	482	92	262	354	+ 128	+ 36.2
13	SPEECH AND DRAMATIC ARTS .....	1,378	2,734	4,117	1,085	2,314	3,404	+ 713	+ 20.9
14	FOREIGN LANGUAGES(TOTAL) .....	1,810	7,317	9,189	1,505	6,846	8,384	+ 805	+ 9.6
15	FRENCH .....	471	3,043	3,564	434	2,884	3,342	+ 222	+ 6.6
16	GERMAN .....	301	729	1,032	235	670	910	+ 122	+ 13.4
17	LATIN .....	105	304	412	88	282	370	+ 42	+ 11.4
18	RUSSIAN .....	48	89	137	36	72	108	+ 29	+ 26.9
19	SPANISH .....	811	2,825	3,643	640	2,531	3,176	+ 467	+ 14.7
20	OTHER .....	74	327	401	72	407	478	+ 77	+ 16.1
21	HOME ECONOMICS .....	4	7,501	7,528	105	6,865	6,983	+ 545	+ 7.8
22	INDUSTRIAL ARTS .....	4,566	49	4,638	4,115	30	4,145	+ 493	+ 11.9
23	JUNIOR HIGH SCHOOL(GENERAL) .....	259	330	590	286	395	681	+ 91	+ 13.4
24	MATHEMATICS .....	5,237	5,479	10,762	4,902	5,131	10,057	+ 705	+ 7.0
25	MUSIC .....	3,199	3,956	7,158	2,795	3,480	6,275	+ 883	+ 14.1
26	PHYSICAL & HEALTH EDUCATION .....	10,806	7,118	17,984	9,038	6,469	15,562	+ 2,422	+ 15.6
	NATURAL & PHYSICAL SCIENCES								
27	(TOTAL) .....	6,450	3,979	10,474	5,597	3,557	9,185	+ 1,289	+ 14.0
28	SUBJECT NOT SPECIFIED .....	948	576	1,556	716	521	1,268	+ 288	+ 22.7
29	GENERAL SCIENCE .....	848	395	1,247	796	421	1,217	+ 30	+ 2.5
30	BIOLOGY .....	3,382	2,515	5,906	3,009	2,216	5,225	+ 681	+ 13.0
31	CHEMISTRY .....	819	406	1,225	724	328	1,052	+ 173	+ 16.4
32	PHYSICS .....	453	87	540	352	71	423	+ 117	+ 27.7
33	SOCIAL STUDIES(TOTAL) .....	19,320	12,624	32,066	16,614	11,133	27,822	+ 4,244	+ 15.3
34	SUBJECT NOT SPECIFIED .....	8,570	5,504	14,174	7,573	4,855	12,503	+ 1,671	+ 13.4
35	HISTORY, GEOGRAPHY .....	7,561	4,712	12,295	6,347	4,168	10,515	+ 1,780	+ 16.9
36	ECONOMICS, SOCIOLOGY,								
37	PSYCHOLOGY .....	1,617	1,478	3,095	1,246	1,183	2,429	+ 666	+ 27.4
38	OTHER SOCIAL STUDIES .....	1,572	930	2,502	1,448	927	2,375	+ 127	+ 5.3
39	TRADE, INDUSTRY, TECHNOLOGY .....	570	37	613	521	34	555	+ 58	+ 10.5
40	OTHER SECONDARY SUBJECTS .....	312	403	715	286	298	584	+ 131	+ 22.4
	SECONDARY-SCHOOL TOTAL .....	66,384	82,454	149,400	57,299	74,772	132,406	+16,994	+ 12.8
	UNGRADED								
41	SPECIAL EDUCATION .....	949	5,677	6,626	810	5,185	5,995	+ 631	+ 10.5
42	LIBRARIAN .....	100	1,099	1,199	81	1,005	1,086	+ 113	+ 10.4
43	GUIDANCE COUNSELOR .....	119	137	256	69	55	124	+ 132	+106.5
44	SCHOOL PSYCHOLOGIST .....	62	53	115	38	39	77	+ 38	+ 49.4
45	SCHOOL SOCIAL WORKER .....	..	..	..	1	12	13	- 13	-100.0
46	SCHOOL NURSE .....	1	268	274	3	328	331	- 57	- 17.2
47	OTHER UNGRADED .....	387	1,116	1,503	404	1,180	1,584	- 81	- 5.1
	GRAND TOTAL .....	78,432	181,778	261,548	68,057	170,282	238,911	+22,637	+ 9.5

## Explanatory Comments on Tables 1A and 1B

1. Coverage. This 23rd annual national survey comprises reports from almost all colleges and universities offering courses leading to the standard certificate for teaching in public schools of the state in which the institution is situated. Thus, Table 1 provides complete coverage of 47 states and the District of Columbia, and almost complete coverage of threestates. The figures given for 1969 are for the end of the year and reflect the total number graduating in 1969 who met certificate requirements. The figures given for 1970 are estimates of the numbers of persons expected to complete their preparation before September 1970. In the report issued for 1969 the total 1969 production was estimated to be 287,549. The total number of persons completing preparation in 1969 was reported in the present study to be 275,028, a decrease of 4.4 percent under the number estimated one year earlier.

2. Classification. Each graduate is counted only once. Those prepared for elementary-school assignments are considered separately from those prepared for similar assignments in secondary schools. Where the graduate is completing preparation for more than one assignment area, he is counted in the field of major concentration.

3. Numbers Prepared for Specific Subjects. Students broadly prepared in English language arts, foreign languages, science, and social studies may have been listed in the general categories or in the specific component subjects. Therefore, the supply listed for a specific subject within these groups may be a minimum rather than an actual estimate of the new supply for the subject. As a result, the comparisons of estimated supply and demand in this study are directed to these major groupings rather than to the specific component subjects. Also, some institutions reported only the total number of graduates in the major subject classifications; therefore, the sum of the entries for components is not always equal to the total listed.

4. Other (lines 35 and 42). Most institutions reporting persons in these lines did not

identify the type of preparation being completed. A few institutions reported in this category the numbers of persons completing preparation for administrative or supervisory assignments.

5. Fields Covering 12 Grades. Some students are prepared to teach a subject at all grade levels. The present study provides for listing as elementary the numbers expected to teach selected subjects in elementary school. Also, persons prepared to teach special education classes and to fill supporting instructional assignments are listed separately as completing preparation for ungraded assignments. In studies prior to 1967 these were included in high-school subjects.

6. Fifth-Year or Master's Degree Requirements. The information for the advanced degree classification is likely to be under-reported because several institutions are not prepared to report information in this classification.

7. Less-Than-Degree Certificates. Although the bachelor's degree is now generally recognized as a minimum requirement for admission to teaching, a few states continue to issue certificates on the basis of less than a bachelor's degree. These partially prepared students are not included in this report.

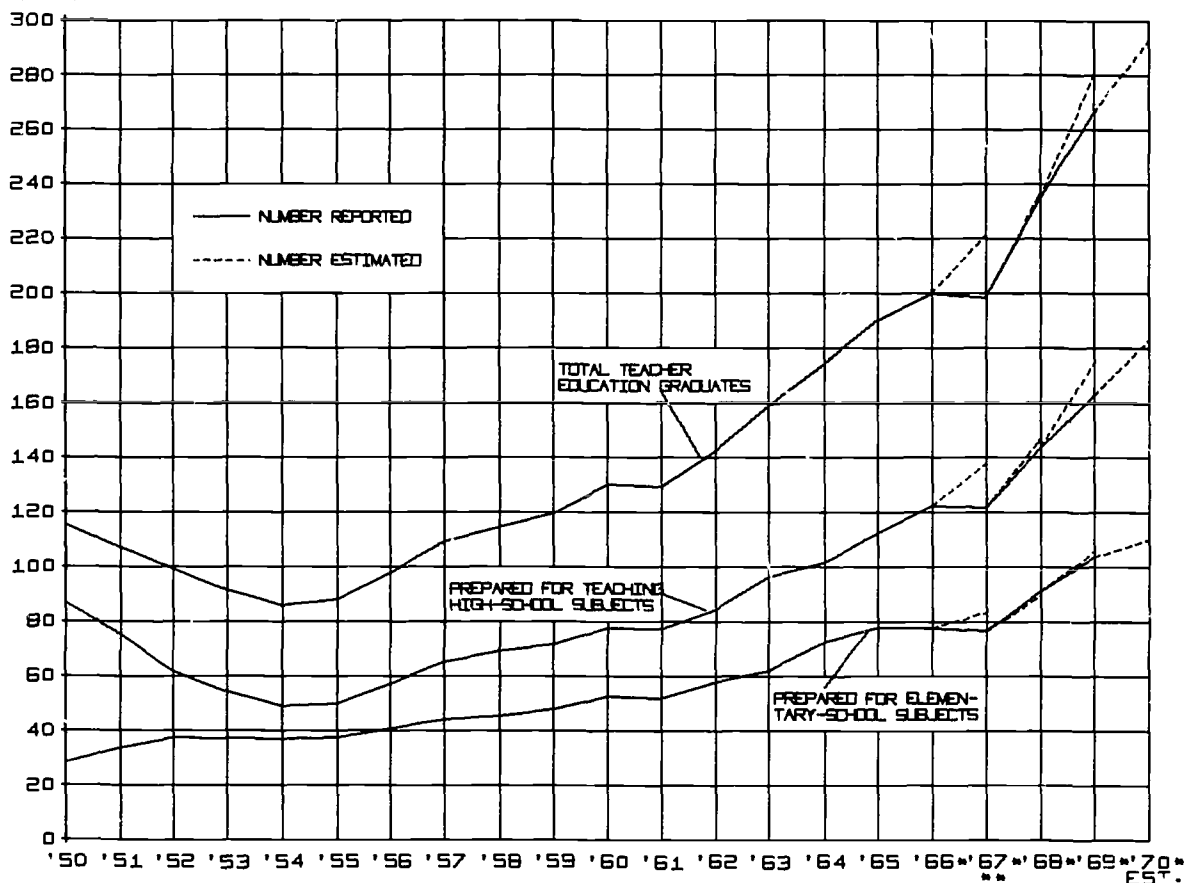
8. State Reports. Many state departments of education recognize the need for much more detailed information concerning the teacher supply-demand situation in their own states. To meet this need, they conduct state-wide studies which include numerous--more specific--elements. Usually such state studies are conducted by the state officials who collaborate in this annual national study. These state reports contribute to a fuller understanding of local conditions and further strengthen the guidance efforts of counselors in high schools and colleges.

TABLE 18. -- COLLEGE STUDENTS COMPLETING MASTER'S DEGREE AND TOTAL COMPLETING BACHELOR'S AND MASTER'S DEGREES, 1970 AND 1969, BY FIELD

LINE NO.	TYPE OF PREPARATION	MEN	1970 WOMEN	TOTAL	MEN	1969 WOMEN	TOTAL	1969 TO 1970 NET CHANGE	1970 PERCENT CHANGE	TOTAL, 1970	BACHELOR'S 1969	AND MASTER'S NET CHANGE	PERCENT CHANGE
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ELEMENTARY-SCHOOL													
1	TOTAL .....	2,254	9,789	12,215	1,769	8,556	10,325	+ 1,890	+ 18.3	114,390	107,620	+ 6,770	+ 6.3
	REGULAR INSTRUCTION ..	2,116	9,437	11,714	1,648	8,204	9,852	+ 1,862	+ 18.9	109,888	103,654	+ 6,234	+ 6.0
	SELECTED SUBJECTS												
	(TOTAL) .....	138	352	501	121	352	473	+ 28	+ 5.9	4,502	3,966	+ 536	+ 13.5
2	ART .....	37	158	206	34	200	234	- 28	- 12.0	1,291	1,186	+ 105	+ 8.9
3	FOREIGN LANGUAGES ..	11	87	98	17	50	67	+ 31	+ 46.3	413	339	+ 74	+ 21.8
4	MUSIC .....	30	61	91	25	60	85	+ 6	+ 7.1	1,290	1,246	+ 44	+ 3.5
5	PHYSICAL & HEALTH EDUCATION .....	60	46	106	45	42	87	+ 19	+ 21.8	1,508	1,195	+ 313	+ 26.2
SECONDARY SCHOOL													
6	AGRICULTURE .....	225	28	253	172	42	214	+ 39	+ 18.2	1,921	1,520	+ 401	+ 26.4
7	ART .....	267	604	877	257	516	773	+ 104	+ 13.5	7,343	6,271	+ 1,072	+ 17.1
8	BUSINESS EDUCATION ..	360	673	1,044	346	498	844	+ 200	+ 23.7	10,827	9,542	+ 1,285	+ 13.5
9	DIPLUMATIC EDUC. ..	59	41	100	48	18	66	+ 34	+ 51.5	585	468	+ 117	+ 25.0
	ENGLISH LANGUAGE ARTS												
	(TOTAL) .....	1,042	2,161	3,338	843	2,055	2,898	+ 440	+ 15.2	32,619	29,167	+ 3,452	+ 11.8
10	ENGLISH .....	873	1,887	2,895	730	1,857	2,587	+ 308	+ 11.9	27,577	25,098	+ 2,479	+ 9.9
11	JOURNALISM .....	25	49	74	24	54	78	- 4	- 5.1	556	432	+ 124	+ 28.7
12	SPEECH & DRAMATIC ARTS .....	144	225	369	89	144	233	+ 136	+ 58.4	4,486	3,637	+ 849	+ 23.3
	FOREIGN LANGUAGES												
	(TOTAL) .....	347	900	1,254	279	852	1,131	+ 123	+ 10.9	10,443	9,515	+ 928	+ 9.8
13	FRENCH .....	86	354	443	78	305	383	+ 60	+ 15.7	4,007	3,725	+ 282	+ 7.6
14	GERMAN .....	40	95	135	38	89	127	+ 8	+ 6.3	1,167	1,037	+ 130	+ 12.5
15	LATIN .....	22	41	63	28	54	82	- 19	- 23.2	475	452	+ 23	+ 5.1
16	RUSSIAN .....	15	20	35	4	9	13	+ 22	+ 169.2	172	121	+ 51	+ 42.1
17	SPANISH .....	137	304	445	103	308	411	+ 34	+ 8.3	4,088	3,587	+ 501	+ 14.0
18	OTHER .....	47	86	133	28	87	115	+ 18	+ 15.7	534	593	- 59	- 9.9
19	HOME ECONOMICS .....	...	504	510	...	435	435	+ 75	+ 17.2	8,038	7,418	+ 620	+ 8.4
20	INDUSTRIAL ARTS .....	543	9	552	504	5	509	+ 43	+ 8.4	5,190	4,654	+ 536	+ 11.5
21	JR. HIGH SCHOOL (GENERAL) .....	24	27	51	67	25	92	- 41	- 44.6	641	773	- 132	- 17.1
22	MATHEMATICS .....	753	563	1,331	663	510	1,173	+ 158	+ 13.5	12,093	11,230	+ 863	+ 7.7
23	MUSIC .....	339	284	630	322	288	610	+ 20	+ 3.3	7,788	6,885	+ 903	+ 13.1
24	PHYSICAL & HEALTH EDUCATION .....	1,086	599	1,713	969	535	1,504	+ 209	+ 13.9	19,697	17,066	+ 2,631	+ 15.4
	NATURAL & PHYSICAL SCIENCES (TOTAL) ..	1,142	602	1,757	1,008	550	1,558	+ 199	+ 12.8	12,231	10,743	+ 1,488	+ 13.9
25	SUBJECT NOT SPEC. ..	248	146	394	234	139	373	+ 21	+ 5.6	1,950	1,641	+ 309	+ 18.8
26	GENERAL SCIENCE ...	214	76	294	146	60	206	+ 88	+ 42.7	1,541	1,423	+ 118	+ 8.3
27	BIOLOGY .....	474	289	772	410	290	700	+ 72	+ 10.3	6,678	5,925	+ 753	+ 12.7
28	CHEMISTRY .....	130	73	203	135	49	184	+ 19	+ 10.3	1,428	1,236	+ 192	+ 15.5
29	PHYSICS .....	76	18	94	83	12	95	- 1	- 1.1	634	518	+ 116	+ 22.4
	SOCIAL STUDIES												
	(TOTAL) .....	2,262	1,668	3,964	2,023	1,454	3,477	+ 487	+ 14.0	36,030	31,299	+ 4,731	+ 15.1
30	SUBJECT NOT SPEC. ..	828	661	1,521	780	566	1,346	+ 175	+ 13.0	15,695	13,849	+ 1,846	+ 13.3
31	HISTORY, GEOGRAPHY ..	967	726	1,693	911	659	1,570	+ 123	+ 7.8	13,988	12,085	+ 1,903	+ 15.7
32	ECONOMICS, SOCIOLOGY, PSYCHOLOGY ..	232	138	372	159	112	271	+ 101	+ 37.3	3,467	2,700	+ 767	+ 28.4
33	OTHER SOCIAL STUDIES .....	235	143	378	173	117	290	+ 88	+ 30.3	2,880	2,665	+ 215	+ 8.1
34	TRADE, INDUSTRY, TECHNOLOGY .....	106	14	120	117	5	122	- 2	- 1.6	733	677	+ 56	+ 8.3
35	OTHER SECONDARY SUBJ.	510	398	908	500	378	940	- 32	- 3.4	1,623	1,524	+ 99	+ 6.5
SECONDARY-SCHOOL													
	TOTAL .....	9,065	9,075	18,402	8,118	8,166	16,346	+ 2,056	+ 12.6	167,802	148,752	+ 19,050	+ 12.8
UNGRADED													
36	SPECIAL EDUCATION ...	436	1,196	1,649	485	1,365	1,850	- 201	- 10.9	8,275	7,845	+ 430	+ 5.5
37	LIBRARIAN .....	163	773	968	164	794	958	+ 10	+ 1.0	2,167	2,044	+ 123	+ 6.0
38	GUIDANCE COUNSELOR ..	1,904	1,780	3,689	2,078	2,010	4,088	- 399	- 9.8	3,945	4,212	- 267	- 6.3
39	SCHOOL PSYCHOLOGIST ..	200	233	433	230	240	470	- 37	- 7.9	548	547	+ 1	+ .2
40	SCHOOL SOCIAL WORKER ..	196	75	271	91	74	165	+ 106	+ 64.2	271	178	+ 93	+ 52.2
41	SCHOOL NURSE .....	1	45	46	2	71	73	- 27	- 37.0	320	404	- 84	- 20.8
42	OTHER UNGRADED .....	989	817	1,806	948	826	1,842	- 36	- 2.0	3,309	3,426	- 117	- 3.4
GRAND TOTAL .....													
		15,208	23,783	39,479	13,885	22,102	36,117	+ 3,362	+ 9.3	301,027	275,028	+ 25,999	+ 9.5

NUMBER OF  
TEACHER  
EDUCATION  
GRADUATES  
(THOUSANDS)

FIGURE I  
GROWTH IN SUPPLY OF BEGINNING TEACHERS



\*GROUPED BY AREA OF PREPARATION AS NOTED IN TABLE 2.

\*\*A FEW INSTITUTIONS IN FOUR STATES DID NOT RESPOND IN 1968 MAKING THE ACTUAL NUMBERS REPORTED FOR 1967 LOWER THAN THE NUMBER WHICH PROBABLY GRADUATED THAT YEAR.

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employment opportunities in schools and in other occupations may be increasing the number of persons in this pool this year.

Persons in this pool provide a reservoir from which some qualified teachers may be drawn to complete the session for teachers who terminate their contracts during the year, to fill new positions which may be created during the school year, to accept on a year-to-year basis employment in teaching positions which would normally be vacant owing to a critical shortage, and to serve as substitute teachers. Others in this pool who prefer to remain unemployed during normal economic conditions probably would return to employment, if requested, in the event of a critical shortage.

#### Teacher Education Graduates Who Postponed Entry into Profession

About 10 percent of the teacher education graduates for whom follow-up information is available do not enter the profession immediately but continue their schooling, enter military service, or begin full-time homemaking responsibilities. (A summary of current conditions is given later in this section.) Many of these potential teachers will enter the profession following completion of advanced schooling or a change in the conditions that influenced them to postpone employment as teachers.

An assumption that one-fifth to one-half of the graduates in these classifications normally

would be interested and available for employment at a later date suggests that 6,000 to 15,000 persons will enter this reserve this year.

### Other Sources of New Teachers

Teaching is a second career for many persons who retire at a relatively early age from military or civil service. Many of them normally complete the teacher education programs and are included in the estimates of the number of new teachers being trained. Some persons in this pool who have the baccalaureate degree and the personal qualifications for successful teaching but have not completed teacher education programs are being placed in positions in which critical shortages dictate such employment.

Some teachers enter or re-enter classrooms from nonteaching positions in education, the graduating class of colleges and universities which do not have approved teacher education programs, teaching positions in post-high-school institutions or preschool classrooms, military service, and a wide variety of other occupations. Precise information is not available about the numbers of persons in these sources who may become part of the total supply of new teachers.

### The New Supply of College Graduates Prepared To Teach

Summarized in Table 1 are the numbers of men and women who are expected to complete teacher education programs with the bachelor's or master's degree between September 1, 1969, and August 31, 1970.

Table 1 shows that a record of at least 114,390 persons are expected to complete their preparation for employment as regular classroom teachers in elementary schools in fall 1970. The enlargement beyond 1969 levels by 6,770 persons is an increase of 6.3 percent. The 12,215 who will have the master's degree represent 10.7 percent of all persons completing for the first time the requirements for entering the profession in regular elementary-school teaching assignments.

At the secondary-school level the number of graduates completing preparation to teach with a bachelor's degree in 1970 is an increase of

16,994, or 12.8 percent, and the number completing preparation with a master's degree is an increase of 2,056 persons, or 12.6 percent. The estimate of at least 167,802 persons completing preparation to teach secondary-school subjects is an increase of 12.8 percent over the number completing their preparation in 1969. The 18,402 having the master's degree represent 11.0 percent of the total number of graduates completing preparation to teach regular subjects in secondary schools.

The ungraded classifications listed in Table 1 are used for the fourth time this year and, as a result, may not have elicited complete reporting; many institutions may not have had data readily available in these classifications. Growth of 5.5 and 6.0 percent is reported in the numbers of persons completing preparation to teach special education classes and to serve as school librarians, respectively. Graduates in these two classifications have been reported by large numbers of institutions as "other" areas of preparation in earlier studies of this series. Some reduction is shown in the number of persons prepared to enter the profession as guidance counselors; the 267 fewer persons represent a decrease of 6.3 percent from the number reported for 1969.

The numbers reported for school psychologists, school social workers, and school nurses are most likely to be under the actual supply because these positions have not been "written in" widely in earlier studies of this series and the information was not readily available to the person completing the survey form. The increase of 93 in the number completing preparation to be school social workers represents a relatively large percentage increase. The apparent percentage decrease in the number completing preparation to be school nurses is not a major change when the 320 expected to complete their preparation in 1970 is compared with the 294 similarly estimated one year ago for 1969.

### Comparison with Other Years

A review of trends in the supply of persons completing their preparation for teaching is provided by Table 2. To provide data groupings comparable with the earlier studies in this series, the numbers of persons completing preparation in selected subject fields for assignment in elementary schools or for special education, and library science, have been regrouped with the high-school subjects. The summary shows continuing growth in the numbers of persons being prepared for elementary- and



TABLE 2.—COLLEGE GRADUATES PREPARED TO TEACH, BY FIELD, AND PERCENT CHANGE FROM 1950<sup>a/</sup>

Line no.	College graduates	1950	1952	1954	1956	1958	1960	1962	1964	1966	1968	1969	1970 est.
1	1	432,058	329,986	290,825	308,812	362,554	392,440	417,846	498,654	551,040	685,000 <sup>c/</sup>	749,000 <sup>c/</sup>	746,000
2	Total receiving bachelor's degree <sup>b/</sup>	...	...	...	...	...	...	...	...	...	...	...	...
3	Percent change from 1950	...	-23.6%	-32.7%	-28.5%	-16.1%	-9.2%	-3.3%	+15.4%	+27.5%	+58.5%	+73.4%	+72.7%
4	TOTAL PREPARED TO TEACH IN ELEMENTARY SCHOOL, REGULAR INSTRUCTION	28,587	37,649	36,885	40,801	45,318	52,630	57,854	72,581	77,703	91,336	103,654	109,888
5	Change from 1950	...	+31.7%	+29.0%	+42.7%	+58.5%	+84.1%	+102.4%	+153.9%	+171.8%	+219.5%	+262.6%	+284.4%
6	PREPARED TO TEACH IN HIGH-SCHOOL OR SPECIFIC SUBJECTS:	3,294	1,891	1,541	1,549	1,804	1,379	1,032	997	1,787	1,443	1,520	1,921
7	AGRICULTURE	...	...	...	...	...	...	...	...	...	...	...	...
8	Change from 1950	...	-42.6%	-53.2%	-53.0%	-45.2%	-58.1%	-68.7%	-69.7%	-45.7%	-56.2%	-53.9%	-41.7%
9	ART	2,225	2,249	1,856	2,072	2,233	2,719	3,031	4,031	4,998	6,502	7,457	8,634
10	Change from 1950	...	+1.1%	-16.6%	-6.9%	+0.4%	+22.2%	+36.2%	+81.2%	+124.6%	+192.2%	+235.1%	+288.0%
11	BUSINESS EDUCATION	7,235	5,165	4,076	5,494	6,166	7,106	6,752	7,207	7,261	8,618	9,542	10,827
12	Change from 1950	...	-28.6%	-43.7%	-24.1%	-14.8%	-1.8%	-6.7%	-0.4%	-0.4%	+19.1%	+31.9%	+49.6%
13	ENGLISH	10,709	8,211	5,278	5,945	7,706	9,295	11,886	16,021	18,410	23,008	25,098	27,577
14	Change from 1950	...	-23.3%	-50.7%	-44.5%	-28.0%	-13.2%	+11.0%	+49.6%	+71.9%	+114.5%	+134.4%	+157.5%
15	FOREIGN LANGUAGES	2,193	1,859	1,368	1,424	1,627	2,178	3,227	5,281	7,162	9,015	9,854	10,856
16	Change from 1950	...	-15.2%	-37.6%	-35.1%	-25.8%	-0.7%	+47.2%	+140.8%	+226.5%	+311.1%	+349.3%	+395.0%
17	HOME ECONOMICS	4,899	4,648	4,212	4,522	4,575	4,812	4,788	5,281	5,690	6,754	7,418	8,038
18	Change from 1950	...	-5.1%	-14.0%	-7.7%	-6.6%	-1.8%	-2.3%	+7.8%	+37.9%	+51.4%	+64.1%	+80.3%
19	INDUSTRIAL ARTS	4,890	3,161	2,201	2,655	3,791	3,785	3,325	3,435	3,432	4,325	4,654	5,190
20	Change from 1950	...	-35.4%	-55.0%	-45.7%	-22.5%	-22.6%	-22.0%	-29.8%	-29.8%	-11.5%	-4.8%	+6.1%
21	MATHEMATICS	4,618	3,142	2,223	2,544	3,445	5,652	6,839	8,026	9,193	10,090	11,230	12,693
22	Change from 1950	...	-32.0%	-51.9%	-44.9%	-25.4%	+22.4%	+48.1%	+73.8%	+99.1%	+118.5%	+143.2%	+161.9%
23	MUSIC	5,296	4,882	4,323	4,798	5,189	5,200	5,302	5,978	6,311	7,335	8,131	9,078
24	Change from 1950	...	-7.8%	-18.4%	-9.4%	-2.0%	-1.8%	+0.1%	+12.9%	+19.2%	+38.5%	+53.5%	+71.4%
25	MEN'S PHYSICAL EDUCATION	10,614	6,546	4,834	5,718	7,430	7,332	6,997	7,181	8,552 <sup>d/</sup>	9,137	10,742	12,830 <sup>d/</sup>
26	Change from 1950	...	-38.3%	-54.5%	-46.1%	-30.0%	-30.9%	-34.1%	-32.3%	-19.4%	-13.9%	+1.2%	+20.9%
27	WOMEN'S PHYSICAL EDUCATION	3,178	2,607	2,440	2,629	2,762	3,177	3,414	4,063	4,924 <sup>d/</sup>	6,547	7,519	8,375 <sup>d/</sup>
28	Change from 1950	...	-18.0%	-23.2%	-17.3%	-13.1%	...	+7.4%	+27.8%	+54.9%	+106.0%	+136.6%	+163.5%
29	NATURAL AND PHYSICAL SCIENCES	9,096	5,246	3,641	4,320	5,467	7,119	7,808	8,608	10,476	10,126	10,743	12,231
30	Change from 1950	...	-40.3%	-60.0%	-52.5%	-39.9%	-21.7%	-14.2%	-5.4%	+15.2%	+11.3%	+18.1%	+34.5%
31	SOCIAL STUDIES	15,349	9,406	7,227	9,125	11,672	13,197	14,724	18,583	22,381	26,328	31,299	36,030
32	Change from 1950	...	-38.7%	-52.9%	-40.5%	-24.0%	-14.0%	-4.1%	+21.1%	+45.3%	+71.5%	+103.9%	+134.7%
33	OTHER FIELDS <sup>e/</sup>	3,294	2,497	3,696	3,990	5,226	4,622	5,364	6,860	11,631 <sup>f/</sup>	14,383 <sup>f/</sup>	17,400 <sup>f/</sup>	19,066 <sup>f/</sup>
34	Change from 1950	...	-24.4%	+12.2%	+21.1%	+58.7%	+40.3%	+62.8%	+108.3%	+253.1%	+336.6%	+428.2%	+478.8%
35	TOTAL PREPARED TO TEACH HIGH-SCHOOL SUBJECTS	86,890	61,510	48,916	56,785	69,093	77,573	84,489	101,552	122,208	143,611	162,607	182,746
36	Change from 1950	...	-29.2%	-43.7%	-34.6%	-20.5%	-10.7%	-2.8%	+16.9%	+40.6%	+65.3%	+87.1%	+110.3%
37	PREPARED TO ENTER SELECTED POSITIONS	...	...	...	...	...	...	...	...	5,007	6,557	8,767	8,393
38	Change from 1950	...	-14.1%	-25.7%	-15.5%	-0.9%	+12.8%	+23.3%	+50.8%	+77.5%	+109.1%	+138.2%	+160.7%
39	GRAND TOTAL PREPARED	115,477	99,159	85,801	97,586	114,411	130,203	142,343	174,133	204,918	241,504	275,028	301,027
40	Change from 1950	...	...	...	...	...	...	...	...	...	...	...	...

<sup>a/</sup> Excludes students meeting certificate requirements at 90-, 60-, or 30-hour levels.  
<sup>b/</sup> From: U. S. Department of Health, Education and Welfare, Office of Education, *Digest of Educational Statistics*, Washington, D. C.: Government Printing Office, 1968. p. 89. Includes bachelor's and first professional degrees.  
<sup>c/</sup> From: U. S. Department of Health, Education and Welfare, Office of Education, *Projections of Educational Statistics to 1977-78*, 1968 edition, Washington, D. C.: Government Printing Office, 1969, p. 31.  
<sup>d/</sup> Numbers of persons for whom sex was not reported are included proportionally.  
<sup>e/</sup> Includes person prepared to teach distributive education, unspecified junior high-school subjects, trade and industrial courses, special education, unspecified elementary-school classes, speech, drama, journalism, library sciences, and subjects not specified.  
<sup>f/</sup> Not directly comparable with earlier years owing to changes in the data-collection instruments.

TABLE 3.--NUMBER OF MEN TEACHER EDUCATION GRADUATES, NUMBER OF MEN TEACHERS IN PUBLIC SCHOOLS, AND PERCENT OF TEACHER EDUCATION GRADUATES AND PERCENT OF ALL TEACHERS WHO ARE MEN, BIENNIALY FROM 1951-52 TO 1965-66 AND ANNUALLY TO 1969-70

Session	Number of men		Percent who are men					
			Elementary		Secondary		Total	
	Teacher education graduates	All teachers <sup>a/</sup>	Teacher education graduates	All teachers <sup>a/</sup>	Teacher education graduates	All teachers <sup>a/</sup>	Teacher education graduates	All teachers <sup>a/</sup>
1	2	3	4	5	6	7	8	9
1951-52 .....	43,485	234,942	19.4%	12.5%	57.1%	45.9%	44.2%	24.4%
1953-54 .....	33,121	253,518	15.3	12.2	52.4	46.3	37.2	24.6
1955-56 .....	36,603	294,170	13.4	12.7	52.7	49.3	36.8	26.0
1957-58 .....	45,662	331,663	13.5	12.8	55.3	50.4	39.4	26.8
1959-60 .....	49,495	392,670	12.5	14.1	53.9	52.8	38.3	29.0
1961-62 .....	51,621	436,575	12.2	14.5	51.6	53.3	36.2	29.9
1963-64 .....	52,731	487,969	10.1	14.5	44.7	53.9	30.3	31.1
1965-66 .....	61,822	543,768	11.1 <sup>b/</sup>	15.2	46.0 <sup>c/</sup>	53.1	31.4 <sup>d/</sup>	31.8
1966-67 .....	59,573	565,339	11.2 <sup>b/</sup>	14.7	44.3 <sup>c/</sup>	53.5	30.4 <sup>d/</sup>	31.6
1967-68 .....	68,508	589,982	10.5 <sup>b/</sup>	14.6	43.4 <sup>c/</sup>	53.5	29.4 <sup>d/</sup>	31.7
1968-69 .....	77,833	623,472	10.4 <sup>b/</sup>	15.1	44.1 <sup>c/</sup>	53.3	29.5 <sup>d/</sup>	32.1
1969-70 .....	89,518	647,353	11.2 <sup>b/</sup>	15.4	45.2 <sup>c/</sup>	53.5	31.0 <sup>d/</sup>	32.4

a/ Data for 1951-52 through 1955-56 from: U.S. Department of Health, Education, and Welfare, Office of Education. Biennial Survey of Education in the United States: 1952-56, Chapter 1, "Statistical Summary of Education, 1953-54," p. 12. Biennial Survey of Education in the United States: 1954-56, Chapter 1, "Statistical Summary of Education, 1955-56," p. 14.

Data for 1957-58 through 1969-70 from: National Education Association, Research Division. Estimates of School Statistics, 1969-70. Research Report 1969-R15. Washington, D.C.: the Association, 1969. p. 14. And earlier editions.

b/ Includes graduates prepared to teach selected subjects at the elementary level.

c/ Does not include persons preparing for ungraded assignments including special education, library science, guidance, school psychologist, school social worker, school nurse, and other ungraded positions.

d/ Includes persons prepared for special education assignment at either level.

high-school assignments. With 1950 as a base, the first year for which complete data are available, the percentages show the general pattern of growth in the supply of college graduates prepared to teach in elementary schools and in the high-school subjects. The table shows that the total number of persons receiving a bachelor's or first professional degree was below the 1950 level through 1960, approached the 1950 level in 1961-62, and has exceeded the 1950 level since 1962. A similar general pattern of lower annual new supply during the 1950-1959 period followed by greater supply since 1962 is observed among the number of persons being prepared to teach in high schools. The number being prepared to teach in elementary schools has been consistently greater than the 1950 level, more than twice as many being graduated each year between 1962 and 1967, more than three times as many in 1968 and 1969, and almost four times as many in 1970 as were being prepared in 1950.

Among the high-school subject areas the numbers of new teacher education graduates are

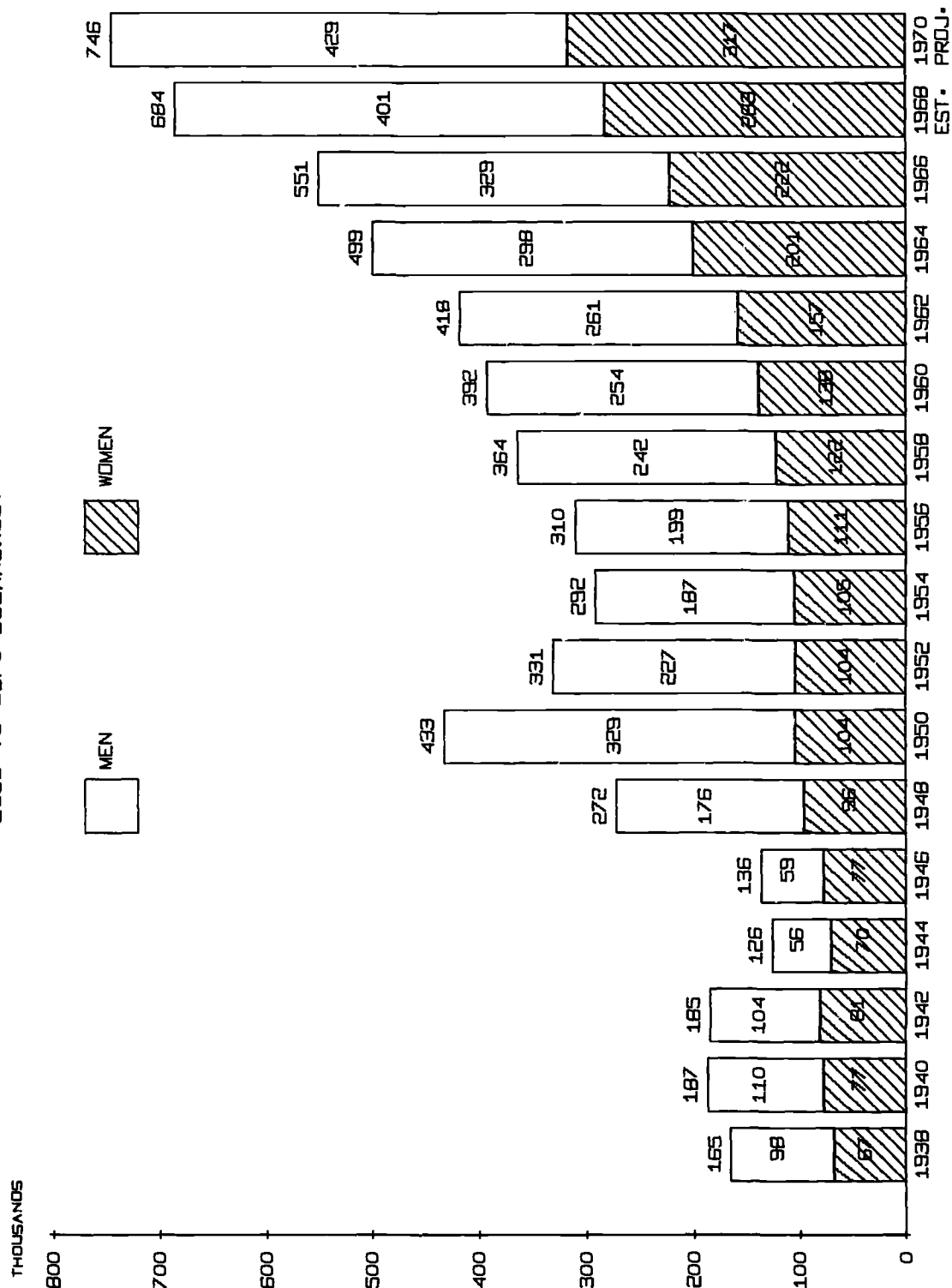
expected to exceed 1950 levels in all areas except agriculture. The current status is a marked change from the 1952 through 1958 period in which the number of new high-school teachers being graduated was lower than the 1950 levels in all areas except "other fields."

Table 2 (page 14) should be interpreted with consideration given to the following: (a) The base year, 1950, contained the crest of the wave of returning World War II veterans who completed their college degrees. (b) The supply of new teacher education graduates in 1950 was not in balance with the demand for new teachers. (c) The impact of the increase in demand for public-school teachers for the flood of enlarged public-school enrollments was yet to be felt. It reached the first grade beginning in 1952-53.

While the number of new elementary-school teacher education graduates has consistently exceeded 1950 levels, this new supply has not



**FIGURE II**  
**BACHELOR'S AND FIRST PROFESSIONAL DEGREES CONFERRED,**  
**1938 TO 1970 BIENNIALY**



SOURCE -  
 U.S. OFFICE OF EDUCATION REPORTS AND PROJECTIONS OF EDUCATIONAL STATISTICS TO 1977-78 (1968 EDITION) • P.31  
 NEA RESEARCH DIVISION

approached the level of the new supply of high-school teachers. During the years in which the elementary-school staff was increasing by larger numbers than the staff in high schools, the number of prospective elementary-school teachers being graduated ranged from one-half to three-fourths as large as the number of prospective high-school teachers.

Also shown in Table 1 are the numbers of persons completing teacher education programs in 1970 and 1969 listed separately by sex at each level. The summary in Table 3 shows that the number of men expected to complete teacher education programs has been increasing since 1954-55. Also listed in Table 3 are the percentages of teacher education graduates and the percentages of all public-school teachers who are men, biennially since 1951-52. Between 1951-52 and 1963-64 there was a decrease in the proportions of teacher education graduates who are men which was accompanied by increasing proportions of the total numbers of teachers who were men. The trend seems to have slowed after 1963-64. Since 1961-62 the number of men has represented less than half of the number of persons expected to complete teacher education programs for entry into secondary-school teaching.

#### New Supply as Percentage of Graduating Class

A broad perspective of the supply of potential teachers may be obtained through a review of the numbers of persons graduating with the bachelor's and first professional degrees. A summary showing the numbers of men and women graduates since 1938 in two-year intervals is given in Figure II. Since 1963 the number of graduates has exceeded the 1950 level, the peak of the increase in college graduates following World War II. The graduating class of 1970 is estimated to be more than one-third larger than the class of 1966.

The percentages of graduates receiving the bachelor's or first professional degree represented by persons completing teacher education programs suggest that teacher preparation attracted an increasing proportion of persons enrolled in higher education until 1966, held near the 1966 level through 1969, and may have increased slightly at the secondary school level in 1970. These classifications are not entirely comparable because the number of teacher education graduates includes persons completing the master's degree and the basis for counting graduates with the first professional degree changed in 1966. Also, because the 1970 projection of graduates is likely to be a conservative estimate. The apparent trend may not be substantiated. Summarized below are the percentages of

the total number of baccalaureate and first professional degree graduates represented by the graduates who have completed teacher education programs, biennially since 1950.

Year	Teacher education graduates as percent of total bachelor's and first professional degree class		
	Elementary school	Secondary school	Total
1950 .....	6.6%	20.1%	26.7%
1952 .....	11.4	18.6	30.0
1954 .....	12.6	16.8	29.4
1956 .....	13.2	18.3	31.5
1958 .....	12.5	19.0	31.5
1960 .....	13.4	19.8	33.2
1962 .....	13.8	20.2	34.1
1964 .....	14.5	20.4	34.9
1965 .....	14.8	21.4	36.2
1966* .....	14.1	22.2	36.2
1967* <sup>a</sup> .....	14.3	23.6	37.9
1968* .....	13.3	21.0	34.3
1969 est.* .....	13.8	21.7	35.5
1970 est.* .....	14.7	24.5	39.2

\*Persons completing preparation to teach specific subjects are grouped within high-school category as in earlier studies of this series. Total does not include the graduates prepared to enter supporting ungraded positions.

<sup>a</sup>/ A few institutions in two states did not respond in 1968.

#### Supply of Prospective Beginning Teachers by State

Tables 1 and 2 summarize the new supply of prospective teachers by assignment level, sex, degree, and secondary-school subject. The conditions in each state are summarized in Tables 4, 5, and 6, showing the number of prospective teachers completing their preparation in 1968 and 1969, grouped by sex, degree, and the instructional level for which they have been prepared. (Complete summaries of information reported by states are given in Table A in the Appendix.) As may be expected from differences in population, there are wide differences among the states in the numbers of persons being prepared for teaching.

Table 4 shows that changes in the total numbers prepared to teach in 1970 range from a reduction of 236 in Minnesota to an increase of 3,743 in Michigan.

The number of teacher education graduates by degree level was requested for the fourth time in the present study. Comparison among the states in the numbers completing preparation at

TABLE 4. -- COLLEGE STUDENTS RECEIVING DEGREES AND PREPARATION TO TEACH IN  
ELEMENTARY AND SECONDARY SCHOOLS, 1970 AND 1969, BY STATE

STATE 1	BACHELOR'S AND MASTER'S COMBINED			
	TOTAL, 1970 2	TOTAL, 1969 3	NET CHANGE 4	PERCENT CHANGE 5
ALABAMA .....	4,618	4,345	+ 273	+ 6.3
ALASKA .....	148	110	+ 38	+34.5
ARIZONA .....	3,467	3,080	+ 387	+12.6
ARKANSAS .....	3,444	3,294	+ 150	+ 4.6
CALIFORNIA .....	13,734	12,596	+ 1,138	+ 9.0
COLORADO .....	3,951	4,182	- 231	- 5.5
CONNECTICUT .....	4,143	3,572	+ 571	+16.0
DELAWARE .....	436	342	+ 94	+27.5
DISTRICT OF COLUMBIA .....	900	774	+ 126	+16.3
FLORIDA .....	6,470	5,797	+ 673	+11.6
GEORGIA .....	4,723	4,523	+ 200	+ 4.4
HAWAII .....	1,040	796	+ 244	+30.7
IDAHO .....	1,155	1,145	+ 10	+ .9
ILLINOIS .....	14,471	12,279	+ 2,192	+17.9
INDIANA .....	8,333	7,709	+ 624	+ 8.1
IOWA .....	5,733	5,779	- 46	- .8
KANSAS .....	4,730	4,748	- 18	- .4
KENTUCKY .....	6,118	5,901	+ 217	+ 3.7
LOUISIANA .....	4,910	4,152	+ 758	+18.3
MAINE .....	1,283	1,014	+ 269	+26.5
MARYLAND .....	3,740	3,346	+ 394	+11.8
MASSACHUSETTS .....	8,645	7,754	+ 891	+11.5
MICHIGAN .....	14,816	11,073	+ 3,743	+33.8
MINNESOTA .....	6,932	7,168	- 236	- 3.3
MISSISSIPPI .....	5,034	4,119	+ 915	+22.2
MISSOURI .....	7,075	6,259	+ 816	+13.0
MONTANA .....	1,667	1,596	+ 71	+ 4.4
NEBRASKA .....	4,349	4,011	+ 338	+ 8.4
NEVADA .....	402	383	+ 19	+ 5.0
NEW HAMPSHIRE .....	1,190	1,099	+ 91	+ 8.3
NEW JERSEY .....	7,421	6,861	+ 560	+ 8.2
NEW MEXICO .....	906	828	+ 78	+ 9.4
NEW YORK .....	23,282	21,472	+ 1,810	+ 8.4
NORTH CAROLINA .....	7,107	6,602	+ 505	+ 7.6
NORTH DAKOTA .....	1,987	1,859	+ 128	+ 6.9
OHIO .....	14,567	14,181	+ 386	+ 2.7
OKLAHOMA .....	4,754	4,915	- 161	- 3.3
OREGON .....	3,982	3,364	+ 618	+18.4
PENNSYLVANIA .....	16,587	15,884	+ 703	+ 4.4
RHODE ISLAND .....	1,132	1,059	+ 73	+ 6.9
SOUTH CAROLINA .....	2,543	2,554	- 11	- .4
SOUTH DAKOTA .....	2,592	2,241	+ 351	+15.7
TENNESSEE .....	6,247	5,792	+ 455	+ 7.9
TEXAS .....	16,158	13,842	+ 2,316	+16.7
UTAH .....	2,908	2,709	+ 199	+ 7.3
VERMONT .....	631	581	+ 50	+ 8.6
VIRGINIA .....	4,200	3,947	+ 253	+ 6.4
WASHINGTON .....	6,500	4,837	+ 1,663	+34.4
WEST VIRGINIA .....	3,304	2,886	+ 418	+14.5
WISCONSIN .....	7,239	6,631	+ 608	+ 9.2
WYOMING .....	488	381	+ 107	+28.1
TOTAL .....	282,192	256,372	+25,820	+10.1

either academic level, therefore, should be interpreted with caution because the states differ in the availability of this information.

Table 5 shows that at the elementary-school level the change in the number of persons completing preparation with a bachelor's degree is within the range of plus or minus 300 in all but 7 states. Increases of more than 300 bachelor's degree graduates are estimated in Illinois,

Michigan, New York, Texas, and Washington. Decreases of more than 300 graduates are estimated in Minnesota and Ohio. With the exception of California and New York, changes in the numbers completing their preparation with a master's degree are within plus or minus 200.

At the secondary-school level (Table 6) the changes in the numbers of persons completing preparation with a bachelor's degree range from

TABLE 5. -- COLLEGE STUDENTS RECEIVING DEGREES AND PREPARATION TO TEACH IN THE ELEMENTARY SCHOOL, 1970 AND 1969, BY STATE

STATE	BACHELOR'S DEGREE				1969 NET CHANGE		TO 1970 PERCENT CHANGE		MASTER'S DEGREE				1969 NET CHANGE		TO 1970 PERCENT CHANGE	
	GRADUATES OF MEN	GRADUATES OF WOMEN	1970 TOTAL	TOTAL, 1969					GRADUATES OF MEN	GRADUATES OF WOMEN	1970 TOTAL	TOTAL, 1969				
1	2	3	4	5	6	7	8	9	10	11	12	13				
ALABAMA .....	48	1,217	1,265	1,266	-	1	-	.1	24	138	162	179	-	17	-	9.5
ALASKA .....	15	44	59	48	+	11	+	22.9	8	16	24	20	+	4	+	20.0
ARIZONA .....	173	1,105	1,278	1,096	+	182	+	16.6	134	374	508	490	+	18	+	3.7
ARKANSAS .....	91	957	1,048	972	+	76	+	7.8	7	55	62	58	+	4	+	6.9
CALIFORNIA .....	368	2,397	2,765	2,947	-	182	-	6.2	592	3,952	4,544	3,735	+	809	+	21.7
COLORADO .....	115	1,131	1,246	1,078	+	168	+	15.6	26	195	221	208	+	13	+	6.3
CONNECTICUT .....	204	1,359	1,563	1,408	+	155	+	11.0	99	386	485	362	+	123	+	34.0
DELAWARE .....	16	144	160	153	+	7	+	4.6	...	...	...	...	...	...	...	...
DISTRICT OF COLUMBIA .....	13	299	312	296	+	16	+	5.4	3	62	65	36	+	29	+	80.6
FLORIDA .....	221	2,269	2,490	2,378	+	112	+	4.7	34	101	135	103	+	32	+	31.1
GEORGIA .....	115	1,585	1,700	1,650	+	50	+	3.0	16	112	128	241	-	113	-	46.9
HAWAII .....	21	364	385	338	+	47	+	13.9	11	219	230	157	+	73	+	46.5
IDAHO .....	53	368	421	430	-	9	-	2.1	39	29	68	67	+	1	+	1.5
ILLINOIS .....	434	4,684	5,118	4,566	+	552	+	12.1	129	267	396	300	+	96	+	32.0
INDIANA .....	255	2,400	2,655	2,546	+	109	+	4.3	1	18	191	9	+	182	+	22.2
IOWA .....	157	1,982	2,139	2,212	-	73	-	3.3	...	...	...	...	...	...	...	...
KANSAS .....	158	1,692	1,850	1,852	-	2	-	.1	5	56	61	114	-	53	-	46.5
KENTUCKY .....	255	1,783	2,038	2,087	-	49	-	2.3	23	62	85	37	+	48	+	129.7
LOUISIANA .....	143	1,775	1,918	1,694	+	224	+	13.2	17	73	90	64	+	26	+	40.6
MAINE .....	97	426	523	510	+	13	+	2.5	...	...	...	...	...	...	...	...
MARYLAND .....	161	1,518	1,679	1,528	+	151	+	9.9	41	75	116	84	+	32	+	38.1
MASSACHUSETTS ..	409	2,774	3,650	3,522	+	128	+	3.6	149	281	430	311	+	119	+	38.3
MICHIGAN .....	521	5,093	5,614	4,029	+	1,585	+	39.3	83	121	204	197	+	7	+	3.6
MINNESOTA .....	344	2,517	2,861	3,401	-	540	-	15.9	5	1	6	11	-	5	-	45.5
MISSISSIPPI .....	160	1,414	1,600	1,357	+	243	+	17.9	20	120	140	49	+	91	+	185.7
MISSOURI .....	179	2,396	2,575	2,444	+	131	+	5.4	4	20	24	23	+	1	+	4.3
MONTANA .....	74	570	644	615	+	29	+	4.7	7	4	11	19	-	8	-	42.1
NEBRASKA .....	233	1,491	1,724	1,687	+	37	+	2.2	20	18	38	31	+	7	+	22.6
NEVADA .....	20	121	141	138	+	3	+	2.2	5	27	32	32	...	...	...	...
NEW HAMPSHIRE ..	26	428	454	440	+	14	+	3.2	8	9	17	13	+	4	+	30.8
NEW JERSEY .....	361	2,659	3,020	2,935	+	85	+	2.9	11	32	43	39	+	4	+	10.3
NEW MEXICO .....	45	279	324	282	+	42	+	14.9	9	16	25	23	+	2	+	8.7
NEW YORK .....	876	8,390	9,268	8,623	+	645	+	7.5	298	1,834	2,132	1,899	+	233	+	12.3
NORTH CAROLINA ..	113	2,087	2,200	2,099	+	101	+	4.8	32	124	156	170	-	14	-	8.2
NORTH DAKOTA .....	58	518	576	610	-	34	-	5.6	...	...	...	...	...	...	...	...
OHIO .....	576	5,075	5,651	6,068	-	417	-	6.9	39	93	132	172	-	40	-	23.3
OKLAHOMA .....	151	1,375	1,526	1,695	-	169	-	10.0	29	193	222	204	+	18	+	8.8
OREGON .....	237	1,419	1,656	1,490	+	166	+	11.1	27	45	72	38	+	34	+	89.5
PENNSYLVANIA .....	910	5,416	6,326	6,307	+	19	+	.3	28	90	118	98	+	20	+	20.4
RHODE ISLAND .....	9	159	472	473	-	1	-	.2	4	10	14	19	-	5	-	26.3
SOUTH CAROLINA ..	33	984	1,017	908	+	109	+	12.0	14	11	25	14	+	11	+	78.6
SOUTH DAKOTA .....	55	788	843	808	+	35	+	4.3	2	16	18	12	+	6	+	50.0
TENNESSEE .....	141	1,736	1,877	1,796	+	81	+	4.5	18	23	41	35	+	6	+	17.1
TEXAS .....	612	5,680	6,292	5,939	+	353	+	5.9	179	375	554	501	+	53	+	10.6
UTAH .....	110	945	1,055	1,062	-	27	-	2.5	18	30	48	18	+	30	+	166.7
VERMONT .....	44	254	298	281	+	17	+	6.0	1	1	2	...	+	2	...	...
VIRGINIA .....	57	1,434	1,491	1,475	+	16	+	1.1	...	22	22	4	+	18	+	450.0
WASHINGTON .....	409	2,077	2,486	2,041	+	445	+	21.8	...	...	...	...	...	...	...	...
WEST VIRGINIA ..	150	885	1,035	899	+	136	+	15.1	...	...	...	...	-	...	-	...
WISCONSIN .....	354	2,373	2,727	2,667	+	60	+	2.2	35	82	117	128	-	11	-	8.6
WYOMING .....	22	138	160	129	+	31	+	24.0	...	1	1	1	...	...	...	...
TOTAL .....	10,430	90,974	102,175	97,295	+	4,880	+	5.0	2,254	9,789	12,215	10,325	+	1,890	+	18.3

TABLE 6. -- COLLEGE STUDENTS RECEIVING DEGREES AND PREPARATION TO TEACH  
IN THE SECONDARY SCHOOL, 1970 AND 1969, BY STATE

STATE	GRADUATES OF		BACHELOR'S DEGREE				GRADUATES OF		MASTER'S DEGREE			
	MEN	WOMEN	1970 TOTAL	1969 TOTAL	1969 NET CHANGE	1970 PERCENT CHANGE	MEN	WOMEN	1970 TOTAL	1969 TOTAL	1969 NET CHANGE	1970 PERCENT CHANGE
1	2	3	4	5	6	7	8	9	10	11	12	13
ALABAMA .....	1,106	1,823	2,929	2,623	+	306 + 11.7	138	124	262	277	-	15 - 5.4
ALASKA .....	25	36	61	42	+	19 + 45.2	1	3	4	...	+	4 ...
ARIZONA .....	590	643	1,233	1,086	+	147 + 13.5	274	174	448	408	+	40 + 9.8
ARKANSAS .....	904	1,206	2,110	2,065	+	45 + 2.2	117	107	224	199	+	25 + 12.6
CALIFORNIA .....	434	489	923	687	+	236 + 34.4	2,622	2,880	5,502	5,227	+	275 + 5.3
COLORADO .....	1,029	1,152	2,181	2,573	-	392 - 15.2	182	121	303	323	-	20 - 6.2
CONNECTICUT .....	727	853	1,580	1,336	+	244 + 18.3	264	251	515	466	+	49 + 10.5
DELAWARE .....	86	190	276	187	+	89 + 47.6	...	...	...	2	-	2 -100.0
DISTRICT OF COLUMBIA .....	113	293	406	329	+	77 + 23.4	51	66	117	113	+	4 + 3.5
FLORIDA .....	1,640	2,025	3,665	3,186	+	479 + 15.0	98	82	180	130	+	50 + 38.5
GEORGIA .....	912	1,708	2,620	2,315	+	305 + 13.2	133	142	275	317	-	42 - 13.2
HAWAII .....	113	186	299	228	+	71 + 31.1	40	86	126	73	+	53 + 72.6
IDAHO .....	382	249	631	606	+	25 + 4.1	19	16	35	42	-	7 - 16.7
ILLINOIS .....	3,859	4,464	8,323	6,967	+	1,356 + 19.5	333	301	634	446	+	188 + 42.2
INDIANA .....	2,513	2,806	5,319	5,147	+	172 + 3.3	4	2	168	7	+	161 +300.0
IOWA .....	1,719	1,875	3,594	3,567	+	27 + .8	...	...	...	...	...	...
KANSAS .....	1,252	1,437	2,689	2,531	+	158 + 6.2	92	38	130	251	-	121 - 48.2
KENTUCKY .....	1,937	1,954	3,891	3,739	+	152 + 4.1	69	35	104	38	+	66 +173.7
LOUISIANA .....	974	1,688	2,662	2,250	+	412 + 18.3	68	172	240	144	+	96 + 66.7
MAINE .....	375	385	760	504	+	256 + 50.8	...	...	...	...	...	...
MARYLAND .....	728	1,100	1,828	1,577	+	251 + 15.9	48	69	117	157	-	40 - 25.5
MASSACHUSETTS ..	1,496	1,915	3,411	3,378	+	439 + 13.0	300	448	748	543	+	205 + 37.8
MICHIGAN .....	3,860	4,651	8,511	6,462	+	2,049 + 31.7	294	193	487	385	+	102 + 26.5
MINNESOTA .....	2,076	1,855	3,931	3,633	+	298 + 8.2	88	46	134	123	+	11 + 8.9
MISSISSIPPI .....	1,286	1,480	2,766	2,564	+	202 + 7.9	242	286	528	149	+	379 +254.4
MISSOURI .....	2,083	2,345	4,428	3,740	+	688 + 18.4	16	32	48	52	-	4 - 7.7
MONTANA .....	536	476	1,012	932	+	80 + 8.6	...	...	...	30	-	30 -100.0
NEBRASKA .....	1,272	1,220	2,492	2,191	+	301 + 13.7	73	22	95	102	-	7 - 6.9
NEVADA .....	110	107	217	194	+	23 + 11.9	5	7	12	19	-	7 - 36.8
NEW HAMPSHIRE ..	304	398	702	633	+	69 + 10.9	8	9	17	13	+	4 + 30.8
NEW JERSEY .....	1,592	2,144	3,736	3,423	+	313 + 9.1	337	285	622	464	+	158 + 34.1
NEW MEXICO .....	296	236	532	497	+	35 + 7.0	21	4	25	26	-	1 - 3.8
NEW YORK .....	3,697	5,566	9,263	8,370	+	893 + 10.7	1,074	1,445	2,619	2,580	+	39 + 1.5
NORTH CAROLINA ..	1,683	2,648	4,331	3,933	+	398 + 10.1	204	216	420	400	+	20 + 5.0
NORTH DAKOTA ..	773	638	1,411	1,249	+	162 + 13.0	...	...	...	...	...	...
OHIO .....	3,983	4,559	8,542	7,667	+	875 + 11.4	157	85	242	274	-	32 - 11.7
OKLAHOMA .....	1,260	1,322	2,582	2,667	-	85 - 3.2	257	167	424	349	+	75 + 21.5
OREGON .....	968	1,187	2,155	1,767	+	388 + 22.0	46	53	99	69	+	30 + 43.5
PENNSYLVANIA .....	4,705	5,081	9,786	9,240	+	546 + 5.9	185	172	357	239	+	118 + 49.4
RHODE ISLAND ...	197	234	591	519	+	72 + 13.9	6	49	55	48	+	7 + 14.6
SOUTH CAROLINA ..	431	987	1,418	1,573	-	155 - 9.9	32	51	83	59	+	24 + 40.7
SOUTH DAKOTA ..	955	727	1,682	1,391	+	291 + 20.9	29	20	49	30	+	19 + 63.3
TENNESSEE .....	1,863	2,314	4,177	3,813	+	364 + 9.5	93	59	152	148	+	4 + 2.7
TEXAS .....	2,990	5,166	8,156	6,413	+	1,743 + 27.2	622	534	1,156	989	+	167 + 16.9
UTAH .....	813	948	1,761	1,517	+	244 + 16.1	33	11	44	92	-	48 - 52.2
VERMONT .....	192	115	307	290	+	17 + 5.9	18	6	24	10	+	14 +140.0
VIRGINIA .....	751	1,833	2,584	2,384	+	200 + 8.4	76	27	103	84	+	19 + 22.6
WASHINGTON .....	1,810	2,204	4,014	2,796	+	1,218 + 43.6	...	...	...	...	...	...
WEST VIRGINIA ..	1,033	1,236	2,269	1,987	+	282 + 14.2	...	...	...	...	...	...
WISCONSIN .....	1,790	2,142	3,932	3,405	+	527 + 15.5	290	173	463	431	+	32 + 7.4
WYOMING .....	161	154	315	233	+	82 + 35.2	6	6	12	18	-	6 - 33.3
TOTAL .....	66,384	82,454	149,400	132,406	+	16,994 + 12.8	9,065	9,075	18,402	16,346	+	2,056 + 12.6

a decrease of 392 to an increase of 2,049. Increases of more than 500 are reported by Illinois, Michigan, Missouri, New York, Ohio, Pennsylvania, Texas, Washington, and Wisconsin. Changes in the number of prospective secondary-school teachers receiving the master's degree range from a decrease of 121 to an increase of 379 with the numbers ranging between plus or minus 100 in 36 of the 46 political subdivisions reporting.

Table 13 shows that 50.7 percent of the new teachers were assigned to elementary-school classrooms, as reported by 23 states for 1969-70. On the assumption that this distribution of new teachers is representative of the national pattern, six states--Alabama, Arkansas, North Dakota, South Dakota, Tennessee, West Virginia, and Wyoming--show a decided imbalance: The number of prospective secondary-school teachers

being graduated is twice as large as the number of potential elementary-school teachers.

The states differ in rate of population growth, proportion of school-age population enrolled in public schools, growth in school enrollments, current status of teacher supply, conditions influencing the morale of teachers, and population mobility. These differences, along with the differences in the percentage of the resident population represented in higher education enrollments, reduce the validity of judgments about the adequacy of the supply of beginning teachers among the states drawn from information in Tables 5 and 6.

#### Occupation of Teacher Education Graduates in 1969

Typically many persons completing teacher education programs do not enter teaching during the subsequent year, even in a time of shortage. A sizable number may be expected either to enter other occupations permanently or to defer their entry into teaching.

Follow-up information about teacher education graduates, gathered by a large proportion of the institutions of higher education, has been part of the annual survey of public-school teacher supply and demand for several years. This year 45 states forwarded follow-up information to the NEA Research Division. Information is not available from Alaska, California, District of Columbia, Indiana, Kentucky, and Tennessee. Information for less than 85 percent of the teacher education graduates of 1969 is available for Colorado, Illinois, Massachusetts, Minnesota (elementary), New York (secondary), Ohio (secondary), Oklahoma, and Rhode Island (secondary). As a whole, follow-up information has been reported this year for 82.0 percent of the prospective elementary-school teachers and for 80.7 percent of the prospective secondary-school teachers who were graduated in 1969.

The occupational status of the teacher education graduates of 1969 is shown in Table 7. Information in column 11 shows that the status of 16.7 percent of the teacher education graduates is not known by these reporting institutions. This condition suggests that the percentage entries in at least one of the other columns are slightly lower than would be observed if follow-up information were available for all graduates.

#### Percent Entering Teaching by November 1969

Table 7 shows that not all of the teacher education graduates become teachers immediately following completion of their training. The figures below indicate the extent to which the

prospective teachers for whom follow-up information is available have actually entered teaching positions each year since 1953:

Year	Percent of eligible graduates having follow-up information reported	Among eligible graduates in institutions reporting follow-up status			
		Percent who entered teaching in			Percent whose employment status is not known
		Ele-mentary school	Sec-ondary school	All schools	
1953	24.9%	77.1%	53.3%	64.4%	23.2%
1954	47.9	78.9	55.7	65.8	12.0
1955	66.8	81.6	62.9	71.3	8.0
1956	71.9	80.8	63.2	70.7	8.9
1957	78.8	82.9	65.5	72.7	7.7
1958	78.1	83.3	67.8	73.7	7.3
1959	72.9	82.3	66.4	72.5	10.1
1960	78.8	82.2	68.1	73.6	9.5
1961	88.3	83.2	68.4	74.3	9.1
1962	87.9	82.3	69.2	74.4	9.4
1963	86.5	82.0	67.9	73.8	10.7
1964	79.4	81.2	67.0	72.7	11.6
1965	93.6	81.2	66.0	72.2	11.5
1966	84.0	80.8	66.6	72.1*	12.7
1967	83.8	78.0	64.3	70.0*	15.5
1968	79.2	78.5	64.6	70.5*	14.8*
1969	81.0	74.1	62.3	67.3*	16.6*

\*Includes special education but excludes other ungraded positions.

This review shows that over the past decade less than three-fourths of the prospective teachers have entered immediate employment as teachers. In broad terms, last year 3 persons in 4 prepared for elementary-school teaching and about 3 persons in 5 prepared for high-school teaching actually accepted teaching positions near the beginning of the school year.

The proportion of potential teachers who entered teaching increased with the increase in demand between 1955 and 1962. Other indications of trends in the entry rates may not be valid in view of the variations in the proportion of all eligible graduates having follow-up information reported and in the percents of eligible graduates whose employment status is not known. The data in this summary show that the most recent proportions provide a very conservative minimum estimate of the net or effective supply of beginning teachers available for employment in 1970-71.

TABLE 7.--OCCUPATION ON NOVEMBER 1, 1969, OF PERSONS WHO WERE GRADUATED BETWEEN SEPTEMBER 1, 1968, AND AUGUST 31, 1969, WITH QUALIFICATIONS FOR STANDARD TEACHING CERTIFICATES

FIELD OF PREPARATION	PERCENT TEACHING			OTHER- WISE GAIN- FULLY EMPLOYED	PERCENT NOT TEACHING			SEEK- ING TEACH- ING JOB			TOTAL PER- CENT	NUMBER OF GRADU- ATES	
	IN STATE	OUT STATE	TOTAL		CONTIN- UING FORMAL STUDY	MILI- TARY SER- VICE	HOME- ING TEACH- ING JOB	SEEK- ING NON- TEACH- ING JOB	NO IN- FORMA- TION				
										2			3
1												13	
ELEMENTARY-SCHOOL TOTAL . .	MEN	55.9	16.6	72.4	3.6	3.2	3.0	.0	1.6	.3	15.8	100.0	9,269
	WOMEN	59.8	14.6	74.3	2.2	2.7	.0	3.7	2.2	.2	14.6	100.0	79,001
	BOTH	59.4	14.8	74.1	2.3	2.8	.4	3.3	2.1	.3	14.8	100.0	88,270
	MEN	56.7	17.2	73.9	3.7	3.1	2.8	.0	1.5	.3	14.7	100.0	8,176
	WOMEN	60.0	14.5	74.6	2.2	2.7	.0	3.7	2.1	.2	14.4	100.0	76,661
	BOTH	59.7	14.8	74.5	2.3	2.7	.3	3.3	2.1	.3	14.5	100.0	84,837
	MEN	42.0	11.6	53.6	6.8	3.4	1.0	.0	1.0	.0	34.3	100.0	207
	WOMEN	46.0	12.3	58.3	4.1	3.5	.1	2.3	3.9	.1	27.7	100.0	853
	BOTH	45.2	12.2	57.4	4.6	3.5	.3	1.9	3.3	.1	29.0	100.0	1,060
	MEN	40.0	40.0	80.0	.0	6.7	.0	.0	6.7	.0	6.7	100.0	15
FOREIGN LANGUAGE . . . .	WOMEN	56.8	19.9	76.7	2.3	4.0	.0	2.3	2.8	.0	11.9	100.0	176
	BOTH	55.5	21.5	77.0	2.1	4.2	.0	2.1	3.1	.0	11.5	100.0	191
MUSIC . . . . .	MEN	44.4	11.4	55.8	2.6	5.8	8.5	.0	3.5	.6	23.1	100.0	342
	WOMEN	53.0	15.6	68.6	2.5	4.3	.2	4.3	3.1	.1	16.7	100.0	806
	BOTH	50.4	14.4	64.8	2.5	4.8	2.7	3.0	3.2	.3	18.6	100.0	1,148
	MEN	55.4	12.3	67.7	1.9	3.2	3.4	.0	1.7	.8	21.4	100.0	529
PHY. AND HEALTH EDUC. . .	WOMEN	57.4	16.0	73.5	1.4	4.0	.0	1.2	2.6	.4	17.0	100.0	505
	BOTH	56.4	14.1	70.5	1.6	3.6	1.7	.6	2.1	.6	19.2	100.0	1,034
SECONDARY SCHOOL													
AGRICULTURE . . . . .	MEN	47.9	7.5	55.5	9.8	6.1	8.1	.0	.5	.3	19.7	100.0	1,275
	WOMEN	21.7	.0	21.7	1.7	.0	.0	6.1	13.9	.0	56.5	100.0	115
BOTH	45.8	6.9	52.7	9.1	5.6	7.4	.0	.5	1.7	.3	22.7	100.0	1,390
	MEN	53.3	12.8	66.1	6.1	5.9	4.6	.0	2.0	.1	15.1	100.0	1,341
ART . . . . .	WOMEN	50.2	11.9	62.0	5.1	4.9	.1	4.6	5.1	.2	17.9	100.0	3,451
	BOTH	51.0	12.1	63.2	5.4	5.2	1.3	3.3	4.3	.2	17.1	100.0	4,792
BUSINESS EDUCATION . . .	MEN	48.7	11.5	60.2	12.0	3.7	5.4	.0	1.7	.5	16.5	100.0	2,281
	WOMEN	47.3	10.7	58.0	12.0	2.8	.1	4.7	2.6	.6	19.2	100.0	5,655
BOTH	47.7	10.9	58.6	12.0	3.1	1.6	3.2	.0	3.9	.3	11.6	100.0	7,936
	MEN	62.0	9.9	71.9	9.6	3.2	3.2	.0	.3	.3	11.6	100.0	345
DISTRIBUTIVE EDUCATION .	WOMEN	50.0	9.8	59.8	5.9	4.9	.0	3.9	.0	.0	25.5	100.0	102
	BOTH	59.3	9.8	69.1	8.7	3.6	2.5	.9	.2	.2	14.8	100.0	447
ENGLISH . . . . .	MEN	55.4	12.6	67.9	4.0	6.5	4.2	.0	2.3	.4	14.6	100.0	4,262
	WOMEN	50.9	13.6	64.5	4.6	6.0	.1	3.9	3.3	.4	17.1	100.0	15,714
BOTH	51.8	13.4	65.2	4.5	6.1	1.0	3.1	3.1	.4	.4	16.6	100.0	19,976
	MEN	39.8	4.8	44.6	16.9	6.0	4.8	.0	12.0	.0	15.7	100.0	83
JOURNALISM . . . . .	WOMEN	34.7	5.7	40.4	6.9	8.2	.0	6.9	8.6	1.6	27.3	100.0	245
	BOTH	36.0	5.5	41.5	9.5	7.6	1.2	5.2	9.5	1.2	24.4	100.0	328
SPEECH AND DRAMATIC ARTS	MEN	44.9	10.7	55.6	5.2	9.8	7.1	.0	3.3	.9	18.0	100.0	899
	WOMEN	42.7	11.5	54.2	5.5	8.9	.2	4.1	4.1	.5	22.4	100.0	2,181
BOTH	43.4	11.3	54.6	5.4	9.2	2.2	2.9	3.9	.6	.6	21.1	100.0	3,080
	MEN	48.6	12.6	61.2	2.8	8.0	7.7	.0	2.8	.3	17.2	100.0	1,437
FOREIGN LANGUAGE . . . .	WOMEN	46.6	12.8	59.4	4.8	7.6	.3	3.5	4.3	.6	19.5	100.0	6,418
	BOTH	46.9	12.8	59.7	4.5	7.6	1.7	2.9	4.0	.5	19.1	100.0	7,875
HOME ECONOMICS . . . .	MEN	36.4	4.5	40.9	.0	4.5	27.3	.0	.0	.0	27.3	100.0	22
	WOMEN	46.3	12.9	59.2	8.6	4.5	.1	7.2	3.4	.6	16.3	100.0	6,217
BOTH	46.2	12.9	59.2	8.6	4.5	.2	7.2	3.3	.6	.6	16.4	100.0	6,239
	MEN	56.4	15.0	71.4	5.6	4.5	5.5	.0	.9	.2	12.0	100.0	3,808
INDUSTRIAL ARTS . . . .	WOMEN	10.0	3.8	13.8	.0	.0	.0	5.0	3.8	.0	73.8	100.0	80
	BOTH	55.4	14.8	70.2	5.3	4.4	5.3	.1	.9	.2	13.3	100.0	3,888
JUNIOR H. S. SUBJECTS . .	MEN	63.8	5.6	69.4	2.5	3.1	7.0	.0	3.1	.0	14.9	100.0	484
	WOMEN	62.8	10.2	73.0	1.9	2.9	.4	6.1	5.9	.4	9.4	100.0	522
	BOTH	63.3	8.0	71.3	2.2	3.0	3.6	3.2	4.6	.2	12.0	100.0	1,006



	1	2	3	4	5	6	7	8	9	10	11	12	13
MATHEMATICS . . . . .	MEN	62.4	11.1	73.5	4.4	4.6	4.7	.0	1.3	.2	11.3	100.0	4,577
	WOMEN	55.1	13.9	69.0	5.9	6.3	.2	3.5	1.6	.2	13.4	100.0	4,787
BOTH		58.7	12.5	71.2	5.1	5.5	2.4	1.8	1.5	.2	12.4	100.0	9,364
MUSIC . . . . .	MEN	55.8	14.7	70.5	2.9	7.5	5.9	.0	1.4	.3	11.5	100.0	2,502
	WOMEN	51.8	17.5	69.3	3.6	6.0	.2	4.4	2.3	.3	14.0	100.0	3,082
BOTH		53.5	16.3	69.8	3.3	6.7	2.7	2.5	1.9	.3	12.9	100.0	5,584
PHYSICAL AND HEALTH EDUC.	MEN	48.6	16.5	65.1	4.4	5.2	5.6	.0	1.4	.1	18.1	100.0	8,128
	WOMEN	50.5	18.0	68.5	5.0	4.2	.2	3.6	2.5	.2	15.9	100.0	5,864
BOTH		49.4	17.1	66.5	4.6	4.8	3.4	1.5	1.9	.1	17.2	100.0	13,992
NAT. AND PHYS. SCIENCES	MEN	61.3	12.3	73.6	4.4	5.5	4.7	.0	1.1	.3	10.5	100.0	641
(NOT SPECIFIED) . . . . .	WOMEN	54.7	14.2	68.9	5.0	6.3	.0	2.8	1.6	.0	15.4	100.0	318
BOTH		59.1	12.9	72.1	4.6	5.7	3.1	.9	1.3	.2	12.1	100.0	959
GENERAL NAT. AND PHYS.	MEN	54.6	11.5	66.1	2.9	5.6	5.8	.0	.7	.3	18.6	100.0	968
SCIENCES . . . . .	WOMEN	44.1	9.1	53.2	3.6	7.3	.0	5.7	2.3	.2	27.7	100.0	560
BOTH		50.8	10.6	61.4	3.1	6.2	3.7	2.1	1.3	.3	21.9	100.0	1,528
BIOLOGY . . . . .	MEN	53.4	12.8	66.1	4.1	6.3	5.5	.0	2.2	.4	15.3	100.0	2,841
	WOMEN	46.0	12.2	58.2	5.3	7.8	.0	4.6	3.2	.9	20.1	100.0	2,108
BOTH		50.2	12.5	62.8	4.6	7.0	3.2	1.9	2.6	.6	17.3	100.0	4,949
CHEMISTRY . . . . .	MEN	54.9	12.3	67.2	5.5	6.6	4.0	.0	3.0	.3	13.4	100.0	656
	WOMEN	50.1	10.3	60.5	9.4	8.0	.0	.9	.9	.6	19.8	100.0	339
BOTH		53.3	11.7	64.9	6.8	7.0	2.6	.3	2.3	.4	15.6	100.0	995
PHYSICS . . . . .	MEN	55.5	10.2	65.6	5.1	6.4	3.1	.0	1.5	.5	17.8	100.0	393
	WOMEN	46.6	16.5	63.1	14.6	5.8	.0	.0	.0	.0	16.5	100.0	103
BOTH		53.6	11.5	65.1	7.1	6.3	2.4	.0	1.2	.4	17.5	100.0	496
SOCIAL STUDIES . . . . .	MEN	46.9	10.5	57.4	6.1	6.4	6.2	.0	3.7	.4	19.8	100.0	14,210
	WOMEN	40.7	11.3	52.0	7.1	6.8	.2	4.4	4.8	.6	24.0	100.0	9,543
BOTH		44.4	10.8	55.2	6.5	6.6	3.8	1.8	4.1	.5	21.5	100.0	23,753
TRADE, INDUST., VOC.,	MEN	36.4	7.7	44.2	10.0	4.2	3.4	.0	.4	.0	37.9	100.0	530
TECH., . . . . .	WOMEN	11.2	11.2	22.5	13.5	3.4	.0	2.2	1.1	1.1	56.2	100.0	89
BOTH		32.8	8.2	41.0	10.5	4.0	2.9	.3	.5	.2	40.5	100.0	619
OTHER SEC. SCHOOL	MEN	48.6	8.3	56.8	10.3	6.7	8.0	.0	2.3	1.0	14.7	100.0	387
SUBJECTS . . . . .	WOMEN	43.2	11.6	34.8	6.6	7.5	.0	5.5	1.4	.2	24.1	100.0	440
BOTH		45.7	10.0	55.7	8.3	7.1	3.7	2.9	1.8	.6	19.7	100.0	827
SECONDARY TOTAL . . . . .	MEN	51.6	12.4	64.0	5.4	5.8	5.6	.0	2.2	.3	16.6	100.0	52,090
	WOMEN	48.0	13.1	61.1	6.1	5.8	.1	4.4	3.5	.5	18.5	100.0	67,933
BOTH		49.6	12.8	62.3	5.8	5.8	2.5	2.5	2.9	.4	17.7	100.0	120,023
UNGRADED	MEN	57.7	12.5	70.2	3.7	4.0	1.8	.0	1.7	.0	18.7	100.0	969
SPECIAL EDUCATION . . . . .	WOMEN	55.0	12.9	68.0	2.4	5.0	.0	1.9	1.2	.2	21.4	100.0	4,881
BOTH		55.5	12.9	68.3	2.6	4.9	.3	1.6	1.2	.1	20.9	100.0	5,850
LIBRARIAN . . . . .	MEN	56.7	10.6	67.3	2.9	2.4	.0	.0	.0	.0	27.4	100.0	208
	WOMEN	57.8	10.5	68.3	2.7	3.3	.0	2.1	1.3	.4	22.0	100.0	1,409
BOTH		57.6	10.5	68.2	2.7	3.2	.0	1.8	1.2	.3	22.7	100.0	1,617
GUIDANCE COUNSELOR . . . . .	MEN	53.9	14.3	68.2	3.4	2.6	.5	.0	.8	.1	24.4	100.0	1,305
	WOMEN	54.9	10.3	65.1	2.3	1.9	.0	2.3	1.5	.2	26.6	100.0	1,130
BOTH		54.4	12.4	66.8	2.9	2.3	.2	1.1	1.1	.1	25.5	100.0	2,435
SCHOOL PSYCHOLOGIST . . . . .	MEN	48.4	11.2	59.6	3.2	8.5	3.2	.0	2.7	.5	22.3	100.0	188
	WOMEN	27.9	4.9	32.8	3.6	2.3	.3	1.3	2.6	.0	57.1	100.0	308
BOTH		35.7	7.3	42.9	3.4	4.6	1.4	.8	2.6	.2	44.0	100.0	496
SCHOOL SOCIAL WORKER . . . . .	MEN	33.3	.0	33.3	.0	.0	.0	.0	.0	.0	66.7	100.0	3
	WOMEN	77.8	.0	77.8	.0	11.1	.0	.0	.0	.0	11.1	100.0	9
BOTH		66.7	.0	66.7	.0	8.3	.0	.0	.0	.0	25.0	100.0	12
SCHOOL NURSE . . . . .	MEN	4.3	.0	4.3	.0	8.7	4.3	.0	.0	.0	82.6	100.0	23
	WOMEN	40.6	1.1	41.7	12.6	1.8	.4	1.4	.7	.0	41.4	100.0	278
BOTH		37.9	1.0	38.9	11.6	2.3	.7	1.3	.7	.0	44.5	100.0	301
OTHER UNGRADED . . . . .	MEN	69.5	5.6	75.1	4.7	2.8	4.5	.0	1.4	.2	11.3	100.0	1,402
	WOMEN	59.3	12.7	72.0	5.3	5.5	.1	5.5	1.3	.2	10.0	100.0	2,451
BOTH		63.0	10.1	73.1	5.1	4.5	1.7	3.5	1.4	.2	10.4	100.0	3,853
GRAND TOTAL . . . . .	MEN	52.7	12.8	65.6	5.1	5.3	5.1	.0	2.1	.3	16.6	100.0	65,457
	WOMEN	54.4	13.7	68.1	4.0	4.2	.1	3.9	2.7	.3	16.7	100.0	157,400
BOTH		53.9	13.5	67.4	4.3	4.5	1.5	2.8	2.5	.3	16.7	100.0	222,857



### Subject Differences

The percentages of prospective teachers who enter teaching immediately following graduation range from 41.0 percent in the trade, industrial, vocational, and technical grouping to 77.0 percent in the foreign languages in elementary school. The ranked percentages by subject field of the graduates who entered teaching by November 1, 1969, are as follows:

<u>Field of preparation</u>	<u>Percent entering teaching</u>
Foreign language in elementary school	77.0%
Elementary school--regular instruction .....	74.5
<u>Elementary-school--total</u> .....	74.1
Junior high-school subjects .....	71.3
Mathematics .....	71.2
Physical and health education in elementary school .....	70.5
Industrial arts .....	70.2
Music .....	69.8
Distributive education .....	69.1
Women's physical and health education	68.5
Special education .....	68.3
Library science .....	68.2
Guidance counselors .....	66.8
English .....	65.2
Men's physical and health education	65.1
Physics .....	65.1
Chemistry .....	64.9
Music in elementary school .....	64.8
Art .....	63.2
Biology .....	62.8
<u>Secondary school</u> (all fields combined) .....	62.3
General natural and physical sciences	61.4
Foreign languages .....	59.7
Home economics .....	59.2
Business education .....	58.6
Art in elementary school .....	57.4
Social studies .....	55.2
Speech and drama .....	54.6
Argiculture .....	52.7
Journalism .....	41.5
Trade, industrial, vocational, technical .....	41.0

The percentages of graduates entering teaching biennially since 1954 by major areas of preparation are reviewed in Table 8. A continuing annual moderation in the percentage entering teaching noted since 1962 is generally observed among the fields. Each of these estimates may reflect minimum levels of entry because they may be increased by the possible entry of persons in the group of approximately 15 percent for whom no follow-up information is available. The percentages of 1969 graduates for whom follow-up information is not available range among the sub-

ject-area groupings from 11.5 percent of persons prepared for teaching foreign languages in elementary school to 40.5 percent of persons prepared to teach the trade-vocational-technical-industrial courses.

A planning estimate of the numbers of graduates who would be available for employment if positions were available in fall 1970 is provided in Table 9. The rationale for this estimate is a change from that used in earlier editions of this series. The present estimate of the new supply of beginning teachers reflects an assumption that if reasonably attractive positions were available, graduates would enter teaching at rates observed during periods of general teacher shortages. The rate of entry estimated for graduates prepared to teach at the elementary school level (83.2 percent) was reported for 1961, a year in which entry rates were near their peak and follow-up information was reported for a very high proportion of teacher education graduates. The rate of entry estimated for graduates prepared to teach in secondary schools (75.0 percent) is higher than the average entry rate reported for secondary education graduates but is near the rate for the total group of teacher education graduates in 1962, the highest entry rate reported in this series of studies. This entry rate is 5 to 20 percentage points higher than the average rate for secondary education graduates reported each year since 1954 but is within two percentage points of the entry rates observed in English, mathematics, general science, and industrial arts during years of greatest shortages.

### State-by-State Differences

Listed in Table 10 are the percents of prospective teachers graduated in each state in 1969 who entered the profession by last November. Comparisons based on these data have limited meaning owing to the differences in the supply-demand situation in these states, differences in the numbers of nonresident prospective teachers being educated in the states, and differences in the percents of teacher education graduates for whom follow-up information is available.

At the elementary-school level while 74.1 percent of the class of 1969 entered teaching by November 1969, the proportions among the states who are known to have entered classroom teaching range from 34.2 percent in Hawaii to 90.1 percent in South Dakota. At the high-school level the percentages of prospective teachers known to have entered teaching immediately after graduation range from 33.6 percent in Hawaii to 76.4 percent in Rhode Island. In Rhode Island, the occupational status is reported for fewer than 85 percent of graduates prepared for secondary-school teaching.

TABLE 8.--PERCENTS OF TEACHER EDUCATION GRADUATES ENTERING CLASSROOMS  
IMMEDIATELY FOLLOWING GRADUATION, 1954-1969, BY SUBJECT AREAS

Subject or level 1	1954 2	1956 3	1958 4	1960 5	1962 6	1964 7	1966 8	1968 9	1969 10
Elementary school, regular instruction .....	78.9%	80.8%	83.3%	82.2%	82.3%	81.2%	80.8%	78.9%	74.5%
High-school subjects:									
Agriculture .....	41.0	50.6	47.3	47.5	56.2	52.7	45.5	56.8	52.7
Art <sup>a/</sup> .....	62.6	66.5	70.5	70.5	70.1	66.8	67.2	63.3	62.1
Business education .....	58.1	56.2	59.8	60.7	63.3	62.7	65.4	61.4	58.6
English .....	67.9	68.4	73.1	73.5	74.7	70.9	71.8	67.1	65.2
Foreign languages <sup>a/</sup> .....	56.0	62.1	68.9	69.6	72.4	70.0	69.4	62.6	60.1
Home economics .....	66.4	65.2	65.3	65.5	65.9	64.7	63.1	63.9	59.2
Industrial arts .....	57.1	61.5	68.9	68.6	72.2	73.9	72.8	70.9	70.2
Journalism .....	59.3	26.5	56.2	53.2	38.8	60.9	59.5	54.1	41.5
Library science .....	85.6	76.8	78.0	77.8	81.8	82.5	69.0	67.5	68.2
Mathematics .....	59.0	66.3	75.8	74.2	73.9	74.1	70.8	71.2	71.2
Music <sup>a/</sup> .....	68.5	68.9	74.5	74.2	72.9	70.1	71.0	68.4	69.0
Physical education--Men <sup>a/</sup> .....	47.1	60.2	66.1	64.3	69.1	65.7	65.4	66.4	65.3
Physical education--Women <sup>a/</sup> .....	76.3	78.2	79.5	79.6	84.2	80.3	78.3	73.9	68.9
General science .....	52.0	64.2	73.5	71.0	73.5	67.4	69.9	62.4	61.4
Biology .....	45.4	58.5	65.0	66.2	68.3	66.7	67.6	67.7	62.8
Chemistry .....	36.1	54.3	65.3	64.4	65.0	61.8	60.5	64.3	64.9
Physics .....	51.5	47.3	69.6	62.1	66.7	60.1	61.4	64.5	65.1
Social studies .....	51.8	59.8	65.2	64.9	64.2	60.5	60.2	58.0	55.2
Speech .....	57.8	61.5	69.9	65.9	65.9	61.4	60.5	58.8	54.6
Total, high-school subjects <sup>b/</sup> .....	55.7%	63.2%	67.8%	68.1%	69.2%	67.0%	66.7%	64.7%	62.9%
Grand total <sup>b/</sup> .....	65.8%	70.7%	73.7%	73.6%	74.4%	72.7%	72.2%	70.3%	68.1%

<sup>a/</sup> Includes persons prepared to teach the subject in elementary schools.

<sup>b/</sup> Includes persons prepared for ungraded assignments.

#### Prospective Teachers Leaving the State in Which They Were Graduated

Also shown in Table 10 are the percentages of teacher education graduates who entered teaching last year who were employed in states other than those in which they were prepared. As noted elsewhere, the differences in the demand for beginning teachers and in the extent to which nonresident students are enrolled within the states would result in differences in the "holding power" of the states.

At the elementary-school level the percents of graduates entering positions outside the state in which they were prepared range from 4.5 percent in Hawaii to 38.5 percent in Nebraska. The percentages of prospective high-school teachers accepting teaching positions outside the state in which they completed their preparation range from 3.8 in Hawaii to 31.6 in South Dakota.

#### Teacher Education Graduates Not Entering Teaching

Table 7 shows the status of the majority of the prospective teachers who did not enter the profession immediately following their graduation. Delayed entry into teaching may be expected from many persons who continued formal study (4.5 percent), entered military service (1.5 percent), entered full-time homemaking (2.8 percent), and were actively seeking a teaching position (2.5 percent). Additional follow-up information is needed to identify the extent these persons may be expected to enter classrooms in future years.

The entry into advanced study seems to be more prevalent among the men than among women prospective teachers, and more prevalent among the persons preparing for high-school subject assignments than among those preparing for elementary-school assignments. As may be expected, entry into military service is a condition influencing men almost exclusively and entering

TABLE 9.--ESTIMATE OF THE SUPPLY OF 1970 TEACHER EDUCATION  
GRADUATES AVAILABLE TO ENTER CLASSROOMS BY NOVEMBER 1, 1970

Level or subject	Number expected to complete preparation	Number available for employment in fall, 1970 <sup>a/</sup>
1	2	3
Elementary school (total) .....	114,390	95,173
Regular instruction .....	109,888	91,427
Art .....	1,291	1,074
Foreign language .....	413	344
Music .....	1,290	1,073
Physical and health education .....	1,508	1,255
Secondary school (total) .....	167,802	125,856
Agriculture .....	1,921	1,441
Art .....	7,343	5,507
Business education .....	10,827	8,120
Distributive education .....	585	439
English .....	27,577	20,683
Journalism .....	556	417
Speech and dramatic arts .....	4,486	3,365
Foreign languages (total) .....	10,443	7,832
Home economics .....	8,038	6,029
Industrial arts .....	5,190	3,893
Junior high-school subjects .....	641	481
Mathematics .....	12,093	9,070
Music .....	7,788	5,841
Physical and health education .....	19,697	14,773
Natural and physical sciences (not specified) .....	1,950	1,463
General natural and physical sciences ..	1,541	1,156
Biology .....	6,678	5,009
Chemistry .....	1,428	1,071
Physics .....	634	476
Social studies (total) .....	36,030	27,023
Trade, industrial, vocational, technical	733	550
Other secondary-school subjects .....	1,623	1,217
Ungraded		
Special education .....	8,275	6,206
Librarian .....	2,167	1,625
Guidance counselor .....	3,945	2,959
School psychologist .....	548	411
School social worker .....	271	203
School nurse .....	320	240
Other ungraded .....	3,309	2,482

<sup>a/</sup> Based on an entry rate of 83.2 percent of graduates prepared to teach in elementary grades and in special education; 75.0 percent of graduates prepared to teach secondary-school grades and other ungraded assignments.

homemaking is a condition influencing women exclusively to postpone or defer permanently their entry into classroom teaching.

The proportion of graduates known to be seeking a teaching position in November following their graduation (2.5 percent) is above the level reported for 1968 (1.6 percent) and is more widely above the level reported for 1967 (0.9 percent). Highest proportions of teacher education graduates still seeking a teaching job in November were in journalism (9.5 percent), junior high-school subjects (4.6 percent), art (4.0 percent), social studies (4.1 percent), foreign languages (4.0 percent), speech and drama (3.9 percent), home economics (3.3 percent), elementary-school art (3.3 percent), elementary-school music (3.2 percent), and English (3.1 percent). Lowest proportions of graduates in a given

subject area who were seeking a teaching position were distributive education (0.2 percent), trade-industrial-vocational subjects (0.5 percent), industrial arts (0.9 percent), guidance counseling (1.1 percent), physics (1.2 percent), special education (1.2 percent), and librarian (1.2 percent). The possibility that these very small differences are related to the status of supply and demand for new teachers in these subjects is supported by the summary beginning on page 43 of this report.

Entry into other occupations is reported for slightly higher proportions of men (5.1 percent) than of women (4.0 percent) and the decision to enter occupations other than teaching is not widespread among persons completing their preparation to teach whose occupation following their graduation is known.

TABLE 10.--LOCATION OF PERSONS WHO WERE GRADUATED BETWEEN SEPTEMBER 1, 1968 AND AUGUST 31, 1969, WITH QUALIFICATIONS FOR STANDARD CERTIFICATES AND WHO ENTERED TEACHING, 45 STATES REPORTING

STATE	NUMBER	ELEMENTARY SCHOOL PERCENT TEACHING			NUMBER	SECONDARY SCHOOL PERCENT TEACHING		
		IN STATE	OUTSIDE STATE	TOTAL		IN STATE	OUTSIDE STATE	TOTAL
1	2	3	4	5	6	7	8	9
ALABAMA . . . . .	1,359	53.9	22.1	75.9	2,593	47.6	20.2	67.8
ARIZONA . . . . .	1,327	48.4	17.9	66.3	1,593	39.6	15.6	55.2
ARKANSAS . . . . .	1,053	53.1	20.7	73.8	2,451	37.0	15.5	52.6
COLORADO . . . . .	889	41.6	22.3	63.9	1,915	36.9	15.0	51.9
CONNECTICUT . . . . .	1,562	66.3	14.1	80.4	1,541	58.1	14.5	72.6
DELAWARE . . . . .	153	44.4	17.6	62.1	189	40.2	15.9	56.1
FLORIDA . . . . .	2,481	45.3	9.0	54.3	3,319	38.5	6.7	45.2
GEORGIA . . . . .	1,810	65.5	8.7	74.1	2,662	54.8	7.6	62.4
HAWAII . . . . .	511	29.7	4.5	34.2	292	29.8	3.8	33.6
IDAHO . . . . .	493	44.6	21.7	66.3	652	35.6	19.3	54.9
ILLINOIS . . . . .	3,713	70.1	10.1	80.2	6,069	60.2	9.3	69.6
IOWA . . . . .	2,078	54.8	26.0	80.8	3,088	46.0	21.7	67.6
KANSAS . . . . .	1,965	60.4	17.8	78.1	2,769	47.6	15.0	62.6
LOUISIANA . . . . .	1,758	59.5	7.2	66.7	2,394	47.5	5.8	53.3
MAINE . . . . .	510	67.5	17.3	84.7	822	50.7	14.0	64.7
MARYLAND . . . . .	1,590	62.6	8.7	71.3	1,619	51.0	9.5	60.5
MASSACHUSETTS . . . . .	2,988	59.4	15.6	75.0	2,878	42.3	13.1	55.4
MICHIGAN . . . . .	4,621	62.4	10.4	72.8	7,213	56.2	6.3	62.4
MINNESOTA . . . . .	2,830	60.5	17.4	78.0	3,665	50.2	15.0	65.2
MISSISSIPPI . . . . .	1,357	48.6	15.3	63.8	2,564	43.6	11.7	55.3
MISSOURI . . . . .	2,092	60.9	20.4	81.3	3,723	46.7	20.5	67.2
MONTANA . . . . .	625	46.2	16.3	62.6	989	40.2	16.0	56.2
NEBRASKA . . . . .	1,741	43.5	38.5	82.0	2,229	47.6	20.9	68.5
NEVADA . . . . .	175	51.4	10.3	61.7	216	33.8	8.3	42.1
NEW HAMPSHIRE . . . . .	468	50.9	30.8	81.6	687	39.3	20.1	59.4
NEW JERSEY . . . . .	2,952	72.1	5.7	77.8	3,433	60.1	4.2	64.3
NEW MEXICO . . . . .	374	59.6	24.1	83.7	618	46.9	17.0	63.9
NEW YORK . . . . .	9,190	62.6	7.3	69.9	8,694	55.0	5.5	60.5
NORTH CAROLINA . . . . .	2,099	58.3	22.9	81.2	4,032	46.3	17.8	64.0
NORTH DAKOTA . . . . .	620	49.0	27.1	76.1	1,249	38.0	30.1	68.1
OHIO . . . . .	6,173	55.1	17.9	73.0	6,718	57.7	12.0	69.7
OKLAHOMA . . . . .	1,465	58.2	23.1	81.2	2,411	44.6	19.5	64.1
OREGON . . . . .	1,528	51.8	14.4	66.2	1,838	42.5	11.0	53.5
PENNSYLVANIA . . . . .	6,405	62.5	17.4	79.9	9,479	52.4	16.2	68.6
RHODE ISLAND . . . . .	411	64.0	17.3	81.3	330	44.8	31.5	76.4
SOUTH CAROLINA . . . . .	812	48.4	16.9	65.3	1,409	42.0	12.5	54.5
SOUTH DAKOTA . . . . .	811	53.4	36.7	90.1	1,379	35.6	31.6	67.2
TEXAS . . . . .	6,467	62.1	5.8	67.9	7,425	52.7	4.8	57.5
UTAH . . . . .	1,100	50.3	20.0	70.3	1,609	36.5	16.3	52.9
VERMONT . . . . .	320	43.8	27.2	70.9	293	40.3	20.8	61.1
VIRGINIA . . . . .	1,426	66.8	10.9	77.6	2,426	53.8	9.3	63.1
WASHINGTON . . . . .	2,139	71.4	10.7	82.1	2,832	50.1	10.8	60.9
WEST VIRGINIA . . . . .	899	44.9	26.7	71.6	1,987	32.2	21.8	54.0
WISCONSIN . . . . .	2,800	68.1	17.7	85.8	3,474	55.5	16.2	71.7
WYOMING . . . . .	130	50.0	24.6	74.6	251	40.6	24.3	64.9

## THE DEMAND FOR NEW TEACHERS

THIS SECTION CONTAINS estimates of the demand for new teachers and the demand for beginning teachers. The separate estimate of the demand for beginning teachers allows comparison with the supply of beginning teachers reviewed in the previous section of this report. Following a review of the difference between the estimated demand for new and beginning teachers are descriptions of two criteria for estimating the demand for new teachers. Finally, this section provides an estimate of the demand for beginning teachers by type of teaching assignment.

### Difference Between Demand for New and Demand for Beginning Teachers

A new teacher is a person entering or re-entering active status who was not employed as a full-time teacher during the preceding school year. A beginning teacher is a person entering active employment as a full-time teacher for the first time. Therefore, the estimated demand for new teachers exceeds the demand for beginning teachers by the number of former teachers expected to re-enter teaching this year.

Estimates of the rate of re-entry of former teachers derived from four sampling studies are shown in Table 11. The rates at the elementary-school level range between 3.2 percent and 4.8 percent, and seem to be slightly lower in recent years than the levels estimated for 1957-58 and 1959-60. The rates at the secondary-school level observed in the four studies varied between 3.0 percent and 4.2 percent. The lowest and highest estimates of the re-entry rate among secondary-school teachers have been derived from the two most recent sampling studies.

The rate of re-entry of former teachers being estimated for 1970 is 3.2 percent in elementary and 3.0 percent in secondary schools, the same as the rates estimated for the 1966-67 session in the most recent survey studies. Applying these rates to the total number of full-time teachers employed in 1969-70 (1,096,696 in elementary schools and 898,659 in secondary schools) provides an estimate that 35,100 former elementary-school teachers and 27,000 former secondary-school teachers will re-enter active employment as teachers in fall 1970 following an interruption of at least one year.

The summary in Table 11 shows that the rates of re-entry of former teachers may not be constant. The variation may be a result of the numerous conditions influencing the supply and demand for teachers, and also it may reflect normal differences associated with sampling error. Multiple factors influencing these estimates of the rate of re-entry require that the planning estimates be interpreted only in very general terms.

### Criteria for Estimating Demand for New Teachers

Two equally useful estimates of the demand for new teachers are presented in this report. The first shows the demand for teachers related to a minimum standard, the second reviews the demand for teachers related to current practices, including the adjustment of recent trends.

Components of the first estimate are the minimum standards of staffing characteristics required for effective instruction in the public schools. This estimate is based on an assumption that the demand for teachers must be related to achieving at least the minimum level of quality in staffing for public education. The estimate based on this assumption is termed the Quality Criterion Estimate (QCE).

The second estimate is based on a continuation of the trends in the improvement of staffing characteristics of public schools in recent years. This second estimate is termed the Adjusted Trend Criterion Estimate (ATCE).

The numbers of new teachers required by each criterion for estimating the demand for new teachers in 1970-71 are presented and discussed in the following sections.

### The Quality Criterion Estimate

The Quality Criterion Estimate is based on the number of new teachers needed to achieve immediately a standard for minimum quality in the staffing of public-school classrooms. The following are discussed separately as components of this estimate: (a) the number of new teachers needed to fill new positions being created to accommodate enrollment changes, and to continue trends toward improved staffing; (b) the number of new teachers needed to replace the teachers who are interrupting or terminating their careers; (c) the number of teachers having substandard professional qualifications who need to be upgraded or replaced; (d) the

TABLE 11.--SUMMARY OF ESTIMATES OF THE DEMAND FOR BEGINNING  
TEACHERS TO REPLACE PERSONS WHO LEAVE TEACHING

Group	Percent of staff in the fall				Planning estimate for 1970-71
	1957-58 <sup>a/</sup>	1959-60 <sup>a/</sup>	1964-65 <sup>b/</sup>	1965-66 <sup>c/</sup>	
1	2	3	4	5	6
<b>ELEMENTARY SCHOOL</b>					
Teachers separating and not transferring to new location for the following year .	11.2%	8.1%	8.5%	5.6% (8.6) <sup>d/</sup>	8.1%
Former teachers re-entering service for the following year .....	4.8	4.1	4.0	3.2	3.2
Difference (positions created by teach- er separations which will need to be filled by beginning teachers for the following year) .....	6.4	4.0	4.5	2.4	4.9
<b>SECONDARY SCHOOL</b>					
Teachers separating and not transferring to new location for the following year .	10.4	8.1	9.9	8.3 (9.0) <sup>d/</sup>	8.6
Former teachers re-entering service for the following year .....	4.1	3.6	4.2	3.0	3.0
Difference (positions created by teach- er separations which will need to be filled by beginning teachers for the following year) .....	6.3	4.5	5.7	5.3	5.6

<sup>a/</sup> Based on: Lindenfeld, Frank. Teacher Turnover in Public Elementary and Secondary Schools, 1959-60. U.S. Department of Health, Education, and Welfare, Office of Education, Circular No. 678. Washington, D. C.: Government Printing Office, 1963. p. 15.

<sup>b/</sup> Based on responses of teachers in a national sampling survey: National Education Association, Research Division. The American Public-School Teacher, 1965-66. Research Report 1967-R4. Washington, D. C.: the Association, 1967. 102 p. Rates of loss to the profession are estimated by subtracting the number of new positions created for 1965-66 from the estimated number of persons teaching that year who were not teaching the previous year, and calculating the percent of the 1964-65 staff represented by this estimated number of positions vacated by teacher separations. Re-entry rates are derived by estimating the number of teachers in 1965-66 who were not teaching in 1964-65 but who have already had teaching experience, then calculating the percent of the 1964-65 staff represented by them.

<sup>c/</sup> Based on responses of teachers in the 1967 Teacher Opinion Poll conducted by the NEA Research Division. The estimates were derived in the manner described above.

<sup>d/</sup> Rate in parentheses is estimated from responses of teachers in 1965-66 about their expected employment status in 1966-67. (See The American Public-School Teacher, 1965-66.)

number of new teachers needed to reduce overcrowded classes to reasonable maximum sizes; and (e) the number of new teachers needed to provide adequate staffing of new educational offerings, added special instructional services, and reorganization for instruction.

The Quality Criterion Estimate of teacher demand should be useful to the teaching profession, civic leaders, public officials, and research analysts in assessing the manpower requirements for attaining minimum quality in

public education. This estimate shows the demand for teachers required by a minimum level of quality in the staffing practices applied to all classrooms without consideration to the obstacles to attaining this standard immediately.

The Demand for New Teachers, Based on the Quality Criterion Estimate--Summarized in Table 12 are the estimated numbers of new teachers needed to achieve the Quality Criterion in each of several components of teacher demand.



The estimated total demand for 446,500 new teachers is an increase of 194,150 positions (9.9 percent) over the number of full-time teachers employed in the fall of 1969. The components of this estimate are described in the following paragraphs.

**Increased Enrollment**--The U.S. Office of Education has estimated that in fall 1970 the number of full-time and part-time elementary-school teachers in public schools will enlarge by 7,000; and secondary-school teachers, by 28,000. These estimates of staff enlargement include an expectation of a continuation of trends toward improved staffing. These estimated increases represent 0.6 percent of the number of full-time elementary-school teachers in fall 1969 (1,096,696), 3.1 percent of the number of full-time secondary-school teachers (898,659), and 1.8 percent of the total number of public-school teachers (1,995,355).

The estimated growth in the numbers of full-time public-school teachers (7,000 in elementary schools and 28,000 in secondary schools) is used in the remainder of this report to calculate the number of new teachers needed to fill new positions created to continue recent trends of staffing improvements as well as to provide instructional services for the enlarged enrollments. Owing to the use of projections of staffing as related to enrollments in recent years, this estimate may reflect a small part of the demand for new teachers estimated separately in some other components.

TABLE 12.--ESTIMATED DEMAND FOR NEW TEACHERS, BASED ON THE QUALITY CRITERION

Source of demand	Estimated demand for new teachers		
	Elementary	Secondary	Total
1	2	3	4
Staff requirement of increased enrollment .....	7,000	28,000	35,000
Teacher turnover ...	88,800	77,300	166,100
Replacement of teachers having substandard qualifications .....	51,800	8,600	60,400
Reduction of overcrowded classes ....	10,400	9,200	19,600
Special instructional services ....	97,353	68,050	165,400
Total .....	255,350	191,150	446,500

**Teacher Turnover**--Earlier studies in this series have used an estimate that the number of positions vacated by teachers who leave the profession each year equals about 8 percent of the total number of teachers. Information from recent studies (Table 11) provided a planning estimate for the 1967 edition of this series. The same rates are used for the 1970 edition (8.1 percent of elementary-school teachers and 8.6 percent of high-school teachers). The rate of loss projected as a planning estimate for elementary-school teachers is the same as the level estimated for 1959-60. The rate of loss projected as a planning estimate for high-school teachers is greater than the level estimated for 1959-60, but is not as high as the rates estimated in two of the four surveys reviewed in Table 11.

The variation in the estimated rates of teacher loss and re-entry derived from the four studies documents the errors in sampling estimates as well as the possibility of continued change in the factors which influence the demand for new teachers. The U.S. Office of Education studies show differences in the rates of teacher turnover and re-entry among school districts grouped by their geographic region. Studies of teacher turnover reported by several states show there are wide differences among the states in these rates. Further, the rates of turnover and re-entry are expected to fluctuate with changes in the adequacy of the supply of beginning teachers, the total demand for qualified teachers, composition of the teaching staff, characteristics of persons in the pool of qualified former teachers, conditions related to the teaching assignments being vacated, rate by which the staff size is enlarged, and the varied economic conditions which influence turnover and re-entry of qualified former teachers. The consideration of the sampling errors of the four studies, continued changes in the conditions influencing teacher turnover and re-entry, and need for additional data to support differences applicable to each sex and subject grouping suggest that the planning estimates used for this study be treated only in very general terms.

In summary, for this study the planning estimate of the demand for new teachers to replace those who leave the profession is 8.1 percent of the number of full-time elementary-school teachers and 8.6 percent of the number of full-time secondary-school teachers. Subtraction of the numbers of teachers expected to re-enter the profession following an interruption of one or more years from the total estimated demand for new teachers provides an estimate of the demand for beginning teachers. The numbers of re-entering teachers estimated for 1970-71 are 35,100 in elementary and 27,000 in secondary schools. Applying these estimates to the number of full-time elementary- and full-time secondary-school teachers in 1969-70

provides the following estimates of demand for new and beginning teachers in fall 1970 to fill positions created by teacher turnover:

Level	Turnover-based demand in 1970-71 for	
	New teachers	Beginning teachers
Elementary school .....	88,800	53,700
Secondary school .....	77,300	50,300
Total .....	166,100	104,000

Replacement of Teachers Having Substandard Qualifications--These estimates are based on an assumption that the minimum educational requirement for qualified teachers is completion of the bachelor's degree and the teachers having less than a bachelor's degree need to be upgraded or replaced. For many of these teachers who lack only one or two years of college this replacement may be on a short-term basis while they return to teacher preparation institutions to complete their degree.

The data in Table 24 (page 53) show an estimate that 5.9 percent of all elementary-school teachers in 1969-70 lacked the bachelor's degree. Applying this percentage to the total number of full-time elementary-school teachers employed in 1969-70 provides an estimate that 64,705 elementary-school teachers lacked the bachelor's degree. The estimated demand for 51,800 elementary-school teachers allows for about 20 percent of the 64,705 elementary-school teachers lacking the bachelor's degree to have completed the degree requirements or to have resigned prior to the 1970-71 session.

The estimate of demand at the secondary-school level is based on the estimated percentage of secondary-school teachers who did not have the bachelor's degree in 1969-70, shown in Table 24. The estimate of 1.2 percent applied to the 898,659 full-time secondary-school teachers employed in the fall of 1969 indicates that 10,784 secondary-school teachers did not have the bachelor's degree in 1969-70. The estimate that 8,600 of these need to be replaced is based on an assumption that 20 percent of the 10,784 teachers lacking the degree will have subsequently graduated or have resigned.

Support for these as being minimum estimates is provided by the reports from the states to the U.S. Office of Education showing the number of full-time classroom teachers who do not meet the state regular certification requirements for the positions which they occupy. The total number of substandard teachers reported and estimated in the fall 1969 survey was 100,000 teachers: 56,400 in elementary schools and 43,600 in secondary schools. Owing to differences among the states in the

minimum educational requirements for certification and differences in specific requirements beyond the attainment of the bachelor's degree, the data from the U.S. Office of Education fall survey are not entirely comparable with the estimates being used in this report.

Reduction of Overcrowded Classes--A national survey by the NEA Research Division in 1969-70 provides a general estimate of the distribution of class size and teacher load in public schools. These percentage distributions were applied to the total number of full-time teachers in the fall of 1969 to obtain an estimate of the number of persons who may have been assigned extremely large classes during 1969-70.

The intervals in these distributions provide a base for these estimates of the minimum numbers of additional teachers needed to reduce maximum size of classes in elementary schools to no more than 34 pupils each and the maximum average daily teacher load in secondary schools to no more than 199 pupils.

Data on the staffing practices for classes on double-shift sessions are not available. Therefore, this summary does not include an estimate of additional demand for new teachers resulting from these classes.

Special Instructional Services--In this classification are the new teachers needed to provide special instructional services, enlarge the scope of educational offerings, and provide special programs for pupils having special learning needs (physically, mentally, and emotionally handicapped, the culturally disadvantaged, etc.). It is estimated that at least 165,400 additional teachers are needed for this component of demand. It is not feasible to establish an accurate estimate of the demand for new teachers resulting from this component because prescriptive statements of minimum standards and precise data about present conditions are nonexistent or limited.

A minimum of 32,950 new teachers are needed to provide kindergarten for the same proportion of five- and six-year-old children as the proportion of seven-year-olds now enrolled in school. This estimate does not include the number of new teachers needed to replace present kindergarten teachers having substandard qualifications, to replace present kindergarten teachers who interrupt or terminate their careers, or to provide improvement of the teacher-pupil ratio at this level of instruction.

At least 300 new teachers are estimated to be needed to enlarge offerings in elementary and secondary schools which have curtailed enrollments in programs of instruction having a critical shortage of qualified applicants. It is not possible to estimate the extent that schools have limited offerings or no offerings



in industrial arts, physical sciences, mathematics, and vocational-technical subjects as a result of the chronic short supply of qualified applicants.

At least 25,850 new teachers are needed to reduce the impact of misassignment of teachers in elementary and secondary schools. These represent about one-sixth of the number of teachers estimated to be teaching full-time in fields other than those of their major preparation--many have improved their preparation following graduation and, with the improving supply-demand situation, many may have moved into more appropriate assignments. This estimate does not include the number of new teachers needed to reduce the effect of the additional 172,377 teachers who are misassigned for more than half but not all of their teaching time.

At least 106,300 new teachers are needed to make significant progress toward providing special education to children and youth who require it. This estimate is about half of the number of new teachers (212,600) which would be needed this year to provide separately organized special education classes for the 10 percent of school-age children and youth needing this program. These estimates do not include the number of new teachers needed to replace present special education teachers having substandard preparation and the demand created by normal turnover of teachers in these assignments.

Estimated Demand for Beginning Teachers Based on the Quality Criterion--Listed below are the estimated numbers of new and beginning teachers needed to achieve the demand based on the Quality Criterion Estimate.

	Number of teachers		
	Elementary	Secondary	Total
Demand for new teachers based on the Quality Criterion Estimate .....	255,350	191,150	446,500
Expected re-entry of former teachers ..	35,100	27,000	62,100
Demand for beginning teachers .....	220,250	164,150	384,400

### The Adjusted Trend Criterion Estimate

The Adjusted Trend Criterion provides an estimate of the number of new teachers who will actually be employed by public school systems in the school year 1970-71 as indicated by recent staffing practices. This estimate is projected from information about the numbers of new teachers employed in recent years. The demand for new teachers in this estimate reflects

a continuation of current trends toward improved staffing conditions rather than immediate achievement of the standards of minimum quality in the staffing of classrooms provided by the Quality Criterion Estimate.

The projections based on the Adjusted Trend Criterion should be especially useful to college and university counselors of potential teachers, to individuals planning careers in teaching, to former teachers considering re-entry into teaching, and to educational leaders. This projection provides an estimate of the immediate condition of the demand for teachers--the minimum number of employment opportunities for beginning and re-entering teachers during the school year 1970-71.

The Demand for New Teachers, Based on the Adjusted Trend Criterion Estimate--Estimates of the number of teaching positions to be filled by the supply of new teachers for the opening of a given school session may be based on trends observed in two components reviewed earlier: (a) positions being created or eliminated as a result of changes in enrollment, organization for instruction, and in the pupil-teacher ratio; and (b) positions created by the teachers who are interrupting or terminating their careers in the public schools during or at the close of the school year.

Teachers Needed To Fill New Positions (ATCE)--The demand for new teachers is influenced by the creation of new positions for increased enrollment, changes in organizational placement of certain grades, and other organizational changes influencing the pupil-teacher ratio (reduction of the number of large classes and provision of specialized educational services). The estimated number of new teaching positions being created for 1970-71 to provide for increased enrollment and continuation of trends in the improvement of staffing related to enrollment are reviewed as part of the Quality Criterion Estimate of demand. It is estimated that between 1969-70 and 1970-71 the number of teachers will increase by 7,000 in elementary schools and by 28,000 in secondary schools.

Teachers Needed To Replace Those Interrupting or Terminating Their Careers--Estimates of the rates of teacher turnover and re-entry were reviewed as one component of the Quality Criterion Estimate of the demand for new teachers. It is estimated that 88,800 new elementary-school teachers will be needed in 1970-71 to replace those who leave employment as teachers following 1969-70, and among these, 53,700 will need to be beginning teachers. At the secondary-school level it is estimated that 77,300 new teachers will be needed in 1970-71 to replace those who have left teaching, and 50,300 of these will need to be beginning teachers.

**Total Estimated Demand for New Teachers**  
Based on the Adjusted Trend Criterion (ATCE)--  
Combination of the estimates from the two components of demand reviewed above provides an estimate that the number of new teachers for whom employment is virtually assured in 1970-71 is 95,800 in elementary schools and 105,300 in secondary schools. These estimates include the demand for 60,700 beginning teachers in elementary schools and 78,300 beginning teachers in secondary schools.

The trends in demand for qualified public-school teachers for a given school year may be changed as a result of changes in various factors such as the following:

- Major modification in the school program and assignment load of teachers
- Enrollment growth related to enlarged educational programs
- Reduction in the ratio of pupils per teacher to provide special programs being encouraged through federal and state legislation
- Change in the rate by which persons having substandard qualifications are being replaced
- Elimination of large classes.

Some of these conditions have been influencing the demand for new teachers during the past several years. The trends in staffing practices observed in the past are included in the data used to derive the estimates of teacher demand based on the Adjusted Trend Criterion. For example, information given later in this report shows marked improvement in the educational qualifications of elementary-school teachers during the past 10 years.

Owing to the lack of precise data, it is difficult to estimate the specific effects of new conditions influencing some of the components of teacher demand. For example, present data do not allow identification of the number of teachers being counted in regular staff turnover or attrition who have substandard certification and are encouraged to resign largely because of this condition.

#### Other Factors Influencing the Demand for New Teachers

The U.S. Office of Education has estimated that the total number of teachers in nonpublic schools in the fall of 1970 will be 1,000 fewer than the number in these schools in fall 1969.

The increased enrollments at the 2-year and 4-year college level may continue to provide

employment opportunities to public-school teachers desiring to move to these levels, thereby opening some positions for new teachers in the elementary and secondary schools. It is estimated that 19,000 more teachers will be needed in higher education in fall 1970 than in fall 1969.

Probably the alleviation of general shortages in many other occupations which attract young people having at least the bachelor's degree and the decreased demands of the military services are contributing to a decrease in the exodus of qualified teachers and an increase in the numbers of qualified potential teachers.

#### Summary of the Estimates of Demand for New Teachers

Listed below are the total numbers of new teachers who will be needed in the fall of 1970 as determined by the two criteria. An estimate of the demand for beginning teachers may be obtained by subtracting the 35,100 elementary- and 27,000 secondary-school teachers expected to re-enter the profession.

Base	Number of new teachers in demand for fall 1970		
	Elementary	Secondary	Total
Adjusted Trend Criterion Estimate .....	95,800	105,300	201,100
Quality Criterion Estimate .....	255,350	191,150	446,500

#### Characteristics of Demand for New Teachers as Suggested by Assignments in Selected States

Varying numbers of states have reported the number of new teachers employed and their assignments as part of the past 22 surveys of teacher supply and demand. (These included experienced teachers returning to the classroom as well as the beginning teachers.) For recent studies the states were asked also to report for each assignment the total numbers of teachers and the number of new teachers who are re-entering active service following an interruption of at least one year. The summary of information from the states which were able to report data for 1969-70 is provided in Table 13.

The distribution of the new teachers among teaching assignments in 1969-70 provides an estimate of the comparative demand between elementary- and high-school levels and among selected assignment areas. As in earlier studies of this series, a general estimate of the 1970-71 demand for new teachers in each subject is projected by applying the percentage distribution of new teachers reported last year to the total estimated demand for new teachers this year.

TABLE 13.--RELATIVE DEMAND FOR NEW ELEMENTARY- AND HIGH-SCHOOL TEACHERS IN VARIOUS STATES AND PERCENT OF ALL PUBLIC-SCHOOL TEACHERS IN ELEMENTARY SCHOOLS, 1948-49 TO 1969-70

Session	Reporting states		Number of states	All public schools	
	Number of new teachers	Percent in elementary schools		Number of teachers	Percent in elementary schools
1	2	3	4	5	6
1948-49 .....	36,208	57.2%	21	887,175 <sup>a/</sup>	64.5%
1949-50 .....	35,242	56.8	18	913,671	64.5
1950-51 .....	41,793	57.7	23 + Alaska & D. C.	938,268 <sup>a/</sup>	64.4
1951-52 .....	45,658	58.9	26 + Alaska & D. C.	962,864	64.4
1952-53 .....	45,859	61.4	26	997,501 <sup>a/</sup>	64.0
1953-54 .....	58,010	60.9	29 + Alaska & D. C.	1,032,138	63.7
1954-55 .....	54,875	60.1	30 + D. C.	1,068,000	64.7
1955-56 .....	58,257	60.6	30 + D. C.	1,141,000 <sup>b/</sup>	64.2
1956-57 .....	62,099	59.9	29 + D. C., Hawaii, & Puerto Rico	1,199,000 <sup>b/</sup>	62.6
1957-58 .....	62,579	56.6	32 + Alaska & D. C.	1,259,000 <sup>b/</sup>	62.4
1958-59 .....	59,651	54.4	30 + Alaska, Hawaii, D. C., & Puerto Rico	1,306,000 <sup>b/</sup>	62.4
1959-60 .....	57,810	53.6	27 + D. C.	1,355,000 <sup>b/</sup>	61.4
1960-61 .....	59,115	55.7	26 + D. C.	1,408,000 <sup>b/</sup>	60.9
1961-62 .....	64,753	53.1	29 + D. C.	1,461,000 <sup>b/</sup>	59.5
1962-63 .....	53,192	53.5	24 + D. C.	1,508,000 <sup>b/</sup>	58.8
1963-64 .....	48,097	51.0	22 + D. C.	1,578,000 <sup>b/</sup>	57.5
1964-65 .....	58,948	53.0	27 + D. C.	1,648,000 <sup>b/</sup>	57.0
1965-66 .....	79,955	50.5	29	1,710,000 <sup>b/</sup>	56.4
1966-67 .....	88,370 <sup>d/</sup>	50.7 <sup>d/</sup>	24	1,789,000 <sup>b/</sup>	56.2
1967-68 .....	92,352 <sup>d/</sup>	48.7 <sup>d/</sup>	28 + D. C.	1,855,200 <sup>c/</sup>	56.1
1968-69 .....	75,063 <sup>d/</sup>	48.4 <sup>d/</sup>	23 + D. C.	1,936,300 <sup>c/</sup>	55.6
1969-70 .....	111,723 <sup>d/</sup>	50.7 <sup>d/</sup>	23	2,013,800 <sup>c/</sup>	55.0

<sup>a/</sup> Estimated from U. S. Office of Education, Biennial Surveys of Education.

<sup>b/</sup> U. S. Department of Health, Education, and Welfare, Office of Education. Projections of Educational Statistics to 1977-78. 1968 edition. Washington, D. C.: Government Printing Office, 1969. p. 47.

<sup>c/</sup> U. S. Department of Health, Education, and Welfare, Office of Education. Statistics of Public Elementary and Secondary Day Schools, Fall 1969. Washington, D. C.: Government Printing Office, 1970. p. 8.

<sup>d/</sup> Librarians are counted as secondary teachers, as in earlier studies.

<sup>e/</sup> Estimated.

Several states reported additional information about the percent of the total number of teachers in each assignment who were new teachers, and the percent of new teachers who are beginning teachers. This information provides the source for an alternate estimate of the number of new and beginning teachers to be employed in 1970-71.

#### Relative Demand for New Elementary- and High-School Teachers

Shown in column 2 of Table 13 are the total numbers of new teachers employed in 1969-70 who were given their complete or major assignment in either elementary- or high-school levels. The total demand for new elementary-school teachers was 2,577 more than the total demand for new high-school teachers in

these 23 states. The new elementary-school teachers represented 51.2 percent of all new teachers. If librarians are included, as in earlier studies, the new elementary-school teachers represented 50.7 percent of all new teachers (shown in Table 13).

An estimate of trends in the relative demand for new teachers between the elementary- and high-school levels is provided by information reported by the varying number of states in the earlier studies of this series. Summarized in Table 13 are the total numbers of new teachers and the percents of these teachers being assigned to elementary schools in the reporting states since 1948-49. Also shown are the total numbers of public-school teachers in the United States during these same years with the percent of all teachers who are assigned duties in the elementary schools.

The information listed in column 6 of Table 13 shows a gradual reduction during the past 22 years in the proportion of all public-school teachers being assigned to elementary schools. This change is shown, also, among the percents of new teachers being assigned to elementary schools in the reporting states. The impact of the marked growth in elementary-school enrollments between 1952-53 and 1957-58 is reflected in the increased percents during these years shown in column 3. The influence of the increased annual growth in secondary-school enrollments upon the demand for new teachers probably has contributed to the lower proportions of new teachers being assigned to elementary schools in recent years.

The percents of all new teachers being assigned to elementary schools in the reporting states are consistently lower than the percents of all teachers in the nation being assigned to elementary schools. If conditions in the reporting states are representative of the nation, the information in Table 13 suggests that the relatively greater annual demand for new (re-entering and beginning) teachers in elementary schools than for high schools has been decreasing, and that during the past five years the demand for new elementary-school teachers was not widely different from the demand for new secondary-school teachers.

These data reflect demand for teachers as defined by the Adjusted Trend Criterion--the demand which has been observed in the employment of new teachers. The demand for new teachers based on the Quality Criterion during these years has consistently called for greater numbers of qualified new teachers being assigned to elementary schools than have been available for such assignment. Possibly, these proportions of new teachers being assigned to elementary schools might have been greater if the supply of qualified new teachers were equally adequate at both levels.

#### **Relative Demand for New Teachers Among High-School Subjects, Adjusted Trend Criterion Estimate**

The distribution of new teachers among the assignments reported by 23 states provides the basis for an estimate of the number of new teachers needed in each assignment in 1970-71. Summarized in column 2 of Table 16 are the numbers of new teachers which will be employed in each assignment in 1970-71 if the percentage distribution of new teachers observed last session in 23 states is projected to the estimated total number of new teachers to be employed in 1970-71.

The basis for an alternate estimate of the 1970-71 demand for new teachers in each assignment is provided by additional information reported for the fourth time in the present study.

The reports of several states contained one or more of the following data by each teaching assignment: The total number of teachers, the number of new teachers, and the number of new teachers who were re-entering active status in 1969-70 following an interruption of at least one year. This additional information allows an estimate of the demand for new teachers for each assignment separately, based on information which reflects the combined influence of growth in total number of persons and the rate of teacher turnover.

Only 19 states were able to supply the total numbers of teachers in each assignment area. To allow correction for the likelihood that the summary distribution from these states is not representative of the national pattern, a second estimate of the distribution of all teachers by assignment areas was derived by using information from NEA Research Division sampling studies conducted during the past six years. The distributions derived from the reports of the 19 states and the average of the percents observed in the six most recent sampling surveys are shown in Table 14. In most assignments the differences in the percent of total staff being estimated by the two sources are smaller than 1 percentage point. The differences are attributable, in part, to the different numbers of assignment classifications (e.g., the junior high-school classification used in the present survey includes some of the staff reported in other subjects in the sampling surveys). Other differences greater than 1 percentage point (English, mathematics, physical and health education, science, social studies, and special education), may reflect sampling error as well as differences from the national average in the staffing assignment pattern of the 19 states reporting the total number of teachers in each major assignment classification.

The states are not consistent in the practice of reporting the numbers of persons assigned as librarians or counselors. It is not clear that all states count them as teachers or if they do, whether or not they are classified by their titles. Therefore, information from the small number of states which reported these positions separately is used later in this report to estimate the demand for persons in these assignments.

Listed in column 4 of Table 15 are the averages of the percents of the staff in each major assignment who were new teachers in the 19 reporting states. The percents varied widely among the reporting states as shown in Appendix Table B which lists the low, high, and median percents reported among the 19 states. The variation of these rates among the reporting states suggests that the average percent does not provide a precise estimate--that the numbers of new teachers projected from these data should be interpreted only in very general terms.

TABLE 14.--THREE ESTIMATES OF THE PERCENT DISTRIBUTION OF SECONDARY-SCHOOL TEACHERS BY MAJOR ASSIGNMENT

Major assignment	Percent of secondary-school teachers		
	Seven-teen states report- ing in 1968-69	Nine-teen states report- ing in 1969-70	Average of six sam- pling sur- veys
	1	2	3
Agriculture .....	1.9%	1.5%	1.0%
Art .....	2.2	2.4	2.2
Business education ...	5.5	6.3	6.1
Distributive education	0.6	0.4	a/
English language arts.	18.3	17.9	20.6
Foreign languages ....	3.9	5.0	5.1
Home economics .....	4.6	4.2	4.8
Industrial arts .....	3.6	4.5	4.7
Junior high school ...	1.3	5.4	a/
Mathematics .....	11.7	11.6	13.8
Music .....	4.2	4.1	3.6
Physical and health education .....	7.6	9.2	7.6
Science .....	10.2	8.7	12.4
Social studies .....	12.3	13.7	15.0
Trade, industrial, vocational, tech- nical .....	1.8	2.1	1.6
Special education ....	3.6	2.3	0.7
Other .....	6.7	0.7	0.8
Total .....	100.0%	100.0%	100.0%

a/ Category not used in tabulating staff by major assignment.

The estimates shown in column 4 of Table 15 list the percents of total staff represented by new teachers observed when the total number of teachers increased by 2.7 percent in elementary schools and by 4.9 percent in secondary schools. The projected growth in total number of teachers between 1969-70 and 1970-71 is estimated to be 0.6 percent in elementary schools and 3.1 percent in secondary schools. The total demand for new teachers in 1969-70 (for both staff enlargement and turnover) represented 10.8 percent of the 1968-69 staff in elementary schools and 13.5 percent of the 1968-69 staff in secondary schools. The projected total demand for new teachers in 1970-71 represents 8.7 percent of the 1969-70 staff in elementary schools and 11.7 percent of the 1969-70 staff in secondary schools. The ratio of the percent of 1969-70 staff represented by the estimated demand for new teachers in 1970-71, to the percent of the 1968-69 staff represented by the demand for new

teachers in 1969-70 was 0.806 at the elementary level and 0.867 at the secondary level. The projected percents of 1970-71 staff in each subject who will be new teachers were derived by applying these ratios to the percents of staff in the subject who were new teachers in 1969-70.

This procedure does not provide for change in the relative rate of growth among the teaching assignments. Additional information about such variation is needed to allow further correction of the projection of teacher demand.

The projected percent of staff expected to be new teachers in 1970-71 was applied to the estimated total number of teachers in each assignment in 1970-71, and the resulting estimate of the demand for new teachers is listed in column 3 of Table 16. In this estimate, the sum of the demand for new teachers among the assignments is more than one-third larger than the total demand estimated for elementary and secondary levels as a whole, listed in column 2.

The information in column 2 of Table 16 provides an estimate which is consistent in method of calculation with those used in earlier reports of this series. The estimate in column 3 of Table 16 is used throughout the remainder of this study as an alternate estimate of the demand for new teachers in 1970-71.

Estimated Demand for Beginning Teachers

The numbers of teachers who may be expected to re-enter active employment following an interruption of at least one year influence the demand for beginning teachers. The rate of re-entry in 1970-71 in elementary- and secondary-school assignments is estimated to be 3.2 percent of all elementary-school teachers and 3.0 percent of all secondary-school teachers in 1969-70; the same rates were estimated last year. The estimated demand for beginning teachers based on an assumption that the total numbers of re-entering teachers are distributed among the assignments on the same basis as the total number of new teachers, as has been the practice in earlier studies of this series, is listed in column 3 of Table 21.

Information from 18 states reporting both the number of new teachers and the number of re-entering teachers in 1969-70 in each assignment provides the base for an alternate estimate of the demand for beginning teachers which allows for the possibility of differences among the assignments in the rate of re-entry of qualified former teachers. The low, median, high, and mean percents of new teachers who were re-entering in the states reporting are listed in Appendix Table C. The estimate listed in column 4 of Table 21 results from applying the average percent of new teachers who were re-entering (listed in column 5 of Table 15) to



TABLE 15.--NUMBER AND PERCENT OF NEW TEACHERS, PERCENT OF STAFF WHO WERE NEW TEACHERS, AND PERCENT OF NEW TEACHERS WHO RE-ENTERED IN 1969-70, BY ASSIGNMENT

Assignment	Number of new teach- ers, 23 states	Percent dis- tribution of new teachers, 23 states	Average per- cent of staff who were new teachers, 19 states	Average per- cent of new teachers who were re-en- tering, 18 states
1	2	3	4	5
Elementary (total)				
Regular instruction .....	51,747	91.4%	17.1%	47.0%
Selected subjects				
Art .....	434 <sup>a/</sup>	0.8 <sup>a/</sup>	18.9 <sup>b/</sup>	28.6 <sup>b/</sup>
Foreign language .....	28 <sup>c/</sup>	0.1 <sup>c/</sup>	11.0 <sup>d/</sup>	33.3 <sup>e/</sup>
Music .....	1,421 <sup>f/</sup>	2.5 <sup>f/</sup>	19.0 <sup>g/</sup>	59.2 <sup>g/</sup>
Physical and health edu- cation .....	1,377 <sup>f/</sup>	2.4 <sup>f/</sup>	27.0 <sup>g/</sup>	45.6 <sup>g/</sup>
Special education .....	1,583 <sup>f/</sup>	2.8 <sup>f/</sup>	16.3 <sup>c/</sup>	37.0 <sup>c/</sup>
Total, classroom instruction	56,590	100.0	...	...
Librarian .....	373 <sup>f/</sup>	...	9.1 <sup>h/</sup>	53.9 <sup>g/</sup>
Guidance counselor .....	76 <sup>a/</sup>	...	8.0 <sup>c/</sup>	57.1 <sup>g/</sup>
Secondary (total)				
Agriculture .....	546 <sup>i/</sup>	1.0 <sup>i/</sup>	13.4 <sup>a/</sup>	42.3 <sup>g/</sup>
Art .....	1,526	2.8	21.7	28.9
Business education .....	2,992	5.5	16.6	41.5
Distributive education .....	163 <sup>a/</sup>	0.3 <sup>a/</sup>	14.7 <sup>g/</sup>	31.9 <sup>d/</sup>
English language arts .....	11,982	22.2	20.9	36.9
Foreign language (total) ...	2,970	5.5	21.8	39.5
Home economics .....	1,980	3.7	16.9	43.6
Industrial arts .....	2,011	3.7	16.2	40.8
Junior high school .....	<sup>j/</sup>	<sup>j/</sup>	34.6 <sup>k/</sup>	71.2 <sup>l/</sup>
Mathematics .....	7,125	13.2	17.5	33.8
Music .....	2,061	3.8	17.1	39.0
Physical and health educa- tion (total) .....	4,570 <sup>m/</sup>	8.5	17.5	40.2
Men .....	<sup>n/</sup>	...	11.7 <sup>o/</sup>	50.9 <sup>p/</sup>
Women .....	<sup>n/</sup>	...	16.0 <sup>o/</sup>	37.1 <sup>p/</sup>
Natural and physical sci- ences (total) .....	6,129 <sup>q/</sup>	11.4	18.4 <sup>g/</sup>	36.5 <sup>g/</sup>
Social studies (total) .....	7,454	13.8	15.3	30.4
Trade, industrial, voca- tional, technical .....	891	1.7	13.9	33.3 <sup>c/</sup>
Special education .....	1,324 <sup>m/</sup>	2.5	17.4 <sup>h/</sup>	29.1 <sup>h/</sup>
Other secondary subjects ...	289 <sup>l/</sup>	0.4	11.2 <sup>r/</sup>	37.3 <sup>k/</sup>
Total classroom instruction	54,013	100.0	...	...
Librarian .....	747 <sup>m/</sup>	...	10.6 <sup>a/</sup>	42.1 <sup>h/</sup>
Guidance counselor .....	404 <sup>i/</sup>	...	4.0 <sup>h/</sup>	72.4 <sup>c/</sup>

a/ Information from 18 states. b/ Information from 14 states. c/ Information from 16 states. d/ Information from 12 states. e/ Information from 9 states. f/ Information from 19 states. g/ Information from 15 states. h/ Information from 17 states. i/ Information from 21 states. j/ Information from 11 states was distributed equally among English language arts, mathematics, natural and physical sciences, and social sciences. k/ Information from 7 states. l/ Information from 10 states. m/ Information from 22 states. n/ Information from 13 states (Among these, men represented 58.3 percent of all physical and health education teachers.) o/ Information from 6 states. p/ Information from 11 states. q/ Information from 20 states. r/ Information from 8 states.

TABLE 16.--SUMMARY OF TWO ADJUSTED TREND CRITERION ESTIMATES  
OF THE DEMAND FOR NEW TEACHERS IN 1970-71

Assignment	Projected total 1970-71 demand distributed as reported by 23 states in 1969-70	Projection of total demand based on the relation of new staff to total staff in assignment in 1969-70 on basis of esti- mated total staff distribution from na- tional sampling studies
1	2	3
ELEMENTARY (total) .....	(95,800)	(154,817)
Regular instruction .....	87,562	148,902
Selected subjects		
Art .....	766	678
Foreign language .....	96	298
Music .....	2,395	1,535
Physical and health education ...	2,299	2,674
Special education .....	2,682	730
SECONDARY (total) .....	(105,300)	(145,756)
Agriculture .....	1,053	1,063
Art .....	2,948	3,863
Business education .....	5,792	8,204
Distributive education .....	316	...
English language arts .....	23,377	34,825
Foreign languages .....	5,792	9,003
Home economics .....	3,896	6,590
Industrial arts .....	3,896	6,146
Junior high school .....	a/	...
Mathematics .....	13,900	19,592
Music .....	4,001	4,976
Physical and health education:		
Men .....	5,218 <sup>b/</sup>	10,790 <sup>c/</sup>
Women .....	3,733 <sup>b/</sup>	c/
Natural and physical sciences .....	12,004	18,531
Social sciences .....	14,531	18,633
Trade, industrial, vocational .....	1,790	1,808
Special education .....	2,633	987
Other subjects .....	420	725

a/ Information reported by 11 states provides an estimate that 9,372 new teachers will be needed; these have been apportioned equally among English, social studies, mathematics, and science.

b/ Projected from information reported by 13 states.

c/ Information from 6 states reporting total and new teachers by sex provides an estimated demand for 3,585 men teachers and 4,933 women teachers.

the estimated demand for new teachers (listed in Table 16, column 3).

#### Quality Criterion Estimate of the Demand for School Librarians and Guidance Counselors

The American Library Association suggests that for a given school there should be a full-time librarian for each 300 pupils up to 900; and, thereafter, one for each additional 400 pupils. With allowance for the influence of schools having various total enrollments, a

general minimum estimate of the total demand for school librarians needed to meet this standard of minimum quality is projected by applying these standards to the estimated distribution of schools by enrollment size in 1969-70. This provides an estimated need for 93,110 full-time librarians in elementary schools and 61,104 full-time librarians in secondary schools in fall 1970. Subtraction of the estimated number of librarians employed in 1969-70 (15,079 in elementary schools and 23,684 in secondary schools) provides an estimated demand in 1970 for 78,031 new librarians in elementary schools and 37,420 new librarians

in secondary schools, in addition to the numbers needed to replace those normally expected to leave their positions between 1969-70 and 1970-71.

If the equivalent of one guidance counselor for each 2,000 pupils in elementary schools were used as a planning estimate for making significant progress toward attaining minimum quality in guidance services at this level, there would be a total demand for 16,215 guidance counselors in elementary schools in fall 1970. Subtraction of the estimated 2,796 persons in this assignment in 1969-70 provides an estimated demand in 1970 for 13,419 new elementary-school guidance counselors, in addition to the number needed to replace those who normally will terminate their

employment in this position between 1969-70 and 1970-71.

Similarly, at the secondary level it is estimated that 44,434 guidance counselors would be needed in fall 1970 to provide one counselor per 300 students enrolled. Subtraction of the estimated 33,991 counselors estimated as being employed in secondary schools in 1969-70 provides an estimated demand for 10,443 new guidance counselors, in addition to the number needed to replace those who leave their positions, to meet this standard of minimum quality in provision of guidance counseling services in secondary schools in fall 1970.

In summary, the following shows the numbers of new staff members which will be needed, in

TABLE 17.--INFORMATION USED TO PROJECT AN ADJUSTED TREND CRITERION ESTIMATE OF THE DEMAND FOR NEW SCHOOL LIBRARIANS AND GUIDANCE COUNSELORS, 1970-71

Type of information	School librarians			Guidance counselors		
	Elementary	Secondary	Total	Elementary	Secondary	Total
1	2	3	4	5	6	7
<u>Information from 15 states, 1969-70</u>						
Number of staff .....	3,489	5,883	9,372	647	8,443	9,090
Number of new staff .....	317	621	938	52	339	391
Percent of staff who are new	9.1%	10.6%	10.0%	8.0%	4.0%	4.3%
<u>Projected national estimate, 1969-70<sup>a/</sup></u>						
Number of staff .....	15,079	23,684	38,763	2,796	33,991	36,787
Number of new staff	1,372	2,511	3,883	224	1,360	1,584
<u>Projected national estimate, 1970-71</u>						
Number of staff <sup>b/</sup> .....	15,174	24,416	39,590	2,814	35,041	37,855
Number of new staff <sup>c/</sup> (demand).	1,108	2,246	3,354	180	1,226	1,406
<u>Information from 18 states, 1969-70</u>						
Average of percents of new staff who were re-entering following an interruption of at least one year .....	53.9%	42.1%	...	57.1%	72.4%	...
<u>Projected national estimate, 1970-71</u>						
Number of beginning staff (demand) .....	511	1,300	1,811	77	338	415

<sup>a/</sup> Based on an assumption that the reporting states are representative of all states. The numbers of teachers who were employed in these states in 1969-70 were 34.2 percent of elementary-school teachers and 33.7 percent of secondary-school teachers.

<sup>b/</sup> Based on an assumption that growth in staff size will parallel growth rate of classroom teachers.

<sup>c/</sup> Based on an assumption that the percent of staff who were new in 1969-70 will be changed in 1970-71 by the same percentage as projected in the growth in the number of classroom teachers.



addition to the number needed to replace persons leaving employment in these positions, to make significant progress toward the general standards of minimum quality in provision of staff for guidance and library services in fall 1970.

Level of assignment	Number of new persons needed in 1970 to move to- ward high quality in pro- vision of staff (in addi- tion to those needed to replace persons leaving)	
	School librarians	Guidance counselors
Elementary schools .	73,031	13,419
Secondary schools ..	37,420	10,443
Total .....	115,451	23,862

#### Adjusted Trend Criterion Estimate of Demand for School Librarians and for Guidance Counselors

Summarized in Table 17 are several types of information used to project an estimate of the actual demand for new school librarians and guidance counselors in 1970-71. Additional information is given in Appendix Tables B and C which show the variation among the states in the conditions which are used in these estimates. This variation, along with the possibility that conditions in the reporting states are not entirely representative of the national situation and the probability of more rapid growth of staff in these assignments than among classroom teachers, suggests that the estimates be interpreted only in very general terms.

The NEA Research Division survey of salaries of school personnel in 1968-69 provided estimates of 29,950 school librarians and 32,352

guidance counselors. The projection of the numbers of persons in these positions in 1969-70 based on information reported by the 15 states (Table 17) provides an estimate of 38,763 school librarians and 36,787 guidance counselors employed in public schools in 1969-70. The projected size of staff in 1969-70 summarized in Table 17 is more than one-fourth larger than the numbers of school librarians reported by the school districts and is about one-eighth larger than the numbers of guidance counselors reported in 1968-69.

The average of the percents of new staff who were re-entering the profession among the 18 reporting states is relatively high; on the average more than half of the new personnel at the elementary-school level, about 2 in 5 of the new secondary-school librarians, and 7 in 10 of the new secondary-school guidance counselors were re-entering employment in education following an interruption of at least one year. The rate of re-entry into these assignments may be different from other assignments in education because several may have been classroom teachers during their previous employment; classroom teaching experience provides valuable background for effective work in these positions. As a result, persons reported as re-entering may be entering as librarians or counselors for the first time. Therefore, the estimated number of both new and re-entering staff needed in 1970-71 are listed.

In summary, it seems likely that there will be actual demand in fall 1970 for at least 3,354 new librarians, of which 1,811 may have to be drawn from the supply of persons prepared to enter the profession for the first time. There will be a demand in fall 1970 for 1,406 new guidance counselors, of which 415 may need to be entering the profession for the first time.

## SUPPLY COMPARED WITH DEMAND FOR NEW TEACHERS

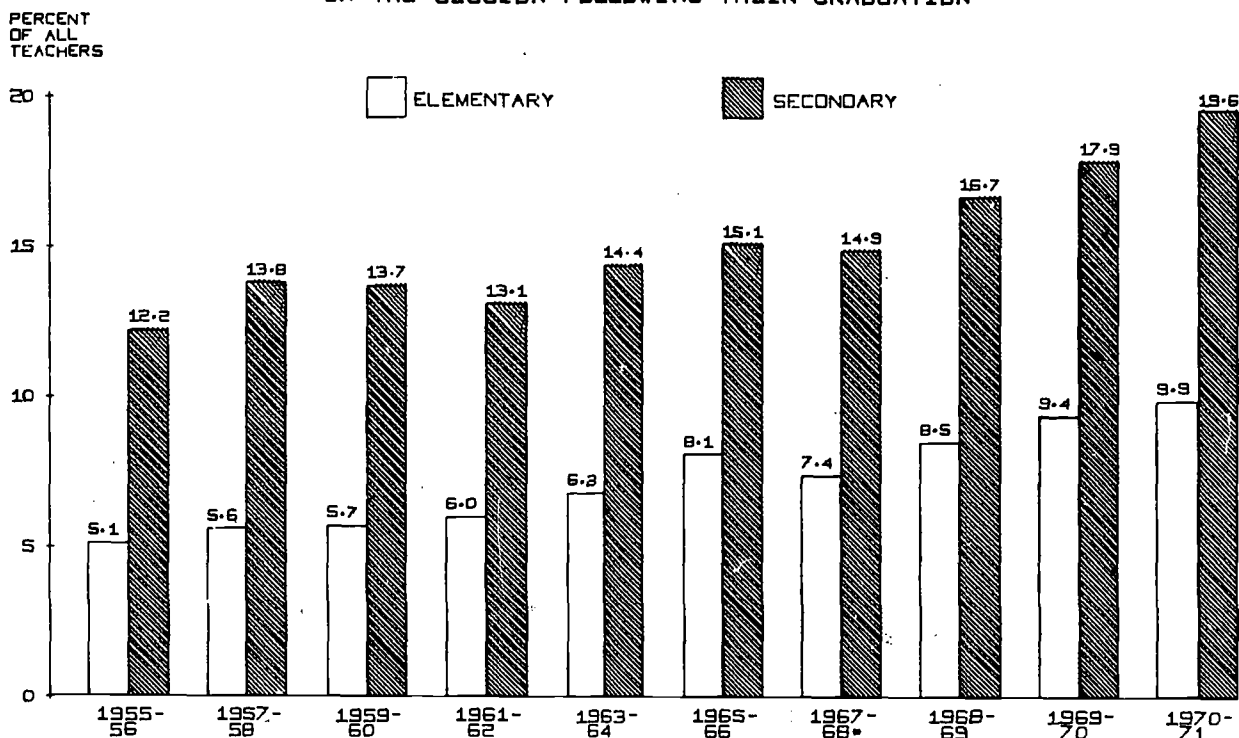
ESTIMATES OF THE SUPPLY of teacher education graduates prepared to enter teaching positions in 1970 and estimates of the number of teaching positions to be filled by these graduates have been presented. A comparison of the numbers of positions included in these estimates provides a general indication of the adequacy of the present supply of beginning teachers and identifies the fields of specialization in which the estimated number of beginning teachers in supply and demand are out of balance. Also provided in this section are estimates of the status of the current supply of beginning teachers as compared with conditions in earlier years.

### Supply of Graduates Compared with Demand

The number of new teachers employed and the number of graduates of teacher preparation programs in the reporting states provide an estimate of the status of the supply compared with demand based on the Adjusted Trend Criterion.

Information about the number of new teachers in 1969-70 and their assignments reported by 23 states was summarized in Table 15 in the preceding section. The numbers of new teachers reported by two states were so large in relation to the total numbers of teachers that it is

FIGURE III  
TEACHER EDUCATION GRADUATES AS PERCENT OF ALL TEACHERS  
IN THE SESSION FOLLOWING THEIR GRADUATION



\*A FEW TEACHER PREPARATION INSTITUTIONS IN TWO STATES DID NOT PARTICIPATE IN THE 1967-68 STUDY, MAKING THE ESTIMATED NUMBER OF GRADUATES IN 1967 FROM 2 TO 6 PERCENT LOWER THAN THE PROJECTED ACTUAL DATA.

NEA RESEARCH DIVISION

TABLE 18.--COMPARISON OF THE TOTAL NUMBER OF TEACHER EDUCATION GRADUATES WITH THE NUMBER OF NEW TEACHERS EMPLOYED IN 21 STATES, 1969-70

Subject	Total number of teacher education graduates	Number of new teachers employed	Difference	Number of teacher education graduates as percent of new teachers employed
1	2	3	4	5
ELEMENTARY (total) .....	(31,143)	(34,868)	-3,725	89.3%
Regular instruction .....	29,949	32,865	-2,916	91.1
Selected subjects:				
Art .....	379	434	-55	87.3
Foreign languages .....	69	28	+41	246.4
Music .....	370	744	-374	49.7
Physical and health education .....	376	797	-421	47.2
SECONDARY (total) .....	(47,570)	(38,147)	(9,423)	(124.7)
Agriculture .....	634	423	211	149.9
Art .....	1,720	1,069	651	160.9
Business education .....	3,607	1,992	1,615	181.1
Distributive education .....	173	151	22	114.6
English language arts (total) .....	9,222	8,835	387	104.4
Foreign languages (total) .....	2,660	1,753	907	151.7
Home economics .....	2,866	1,362	1,504	210.4
Industrial arts .....	1,549	1,353	196	114.5
Junior high school (general) .....	25	...	25	...
Mathematics .....	3,291	5,431	-2,140	60.6
Music .....	2,391	1,499	892	159.5
Physical and health education .....	5,805	2,892	2,913	200.7
Natural and physical sciences (total) ...	3,265	4,543	-1,278	71.9
Social sciences (total) .....	9,395	5,788	3,607	162.3
Trade, industrial, vocational, technical .	354	767	-413	46.2
Other .....	613	289	324	212.1
UNGRADED (total) .....	(3,929)	(4,358)	(-429)	(90.2)
Special education .....	1,946	2,776	-830	70.1
Librarian .....	611	1,102	-491	55.4
Guidance counselor .....	1,372	480	892	285.8

likely that the number reported includes the teachers transferring to new assignments. The new teachers reported by these states represent about one-third of all teachers--a proportion which is twice as large as the average for the entire group of 23 states. Because of this discrepancy and because these two states are reporting these data for the first time this year, they are not included in the following summary. The total numbers of new teachers and the numbers of persons completing teacher education programs in 21 states in 1969 are listed in Table 18. Caution should be used in analyzing the data contained in Table 18 since the number of prospective teachers being educated in a given state may not represent the actual supply of beginning teachers for the state because of nonresident graduates and migration of resident graduates. Also limiting the accuracy of comparisons based on these figures is the possibility that experienced for-

mer teachers may be in greater supply, or demand, in some subjects than in others. This would modify the estimated relative demand for beginning teachers to fill the positions listed as being filled by new teachers.

Table 18 shows that the areas in which the supply of beginning teachers is least adequate include secondary-school mathematics, special education, secondary-school sciences, trade-industrial-vocational subjects, and elementary-school teaching. If the entire class of teacher education graduates in these 21 states entered teaching, the supply of beginning teachers in these subjects would not equal the demand for new teachers. However, if the number of persons expected to re-enter teaching in these subjects is considered, it is likely that the potential supply of beginning teachers is near the level of demand. The limited information about supply and demand for assignments in

elementary-school selected subjects suggests that these have an inadequate supply. However, the limitations in the availability of data about these assignments require that the results be interpreted with caution.

### Trends in Supply and Demand in Reporting States

Information in Table 19 provides an estimate of trends in supply and demand conditions as observed in the reporting states in four-year intervals since 1948-49. The composition of participating states changes each year; this reduces the validity of comparisons over the years. Despite other indicators of a more adequate new supply this year, data from the 21 states reporting their new teachers suggests only a small change in adequacy of supply from that suggested by data forwarded from 23 states and the District of Columbia last year. The table shows that in the selected states the supply of qualified beginning elementary-school teachers has been rising toward the numbers of new teachers employed. Mathematics, which comprises 13 percent of the new high-school teachers, also has consistently been in relatively low supply in these selected years. The sciences, involving about 11 percent of new teachers, have been in relatively short supply. English language arts, involving about 22 percent of the new high-school teachers seems to have regressed slightly after a recent improvement in supply. Library science, involving 1 to 2 percent of the new high-school teachers, has been in relatively short supply in almost all of these years studied. Industrial arts, involving about 3 percent of the new high-school teachers seems to have lost a recent improvement in supply.

### Supply of Beginning Teachers Compared with Total Number of Teachers Employed

An estimate of the present status of teacher supply and demand may be provided by a comparison over several years between the number of prospective teachers being graduated and the total number of teachers employed. Allowance should be made for changes in the influence of annual growth of the teaching staff and differences in the proportion of teachers leaving the profession. Normally the proportion of the total number of teachers represented by the number of graduates completing teacher education would not be expected to vary widely if the new supply is keeping pace with a steady enlargement of the demand for beginning teachers.

Shown in Table 20 are the percents of the total number of teachers represented by the number of teacher education graduates ready for

entry each year since 1955-56. During these years of marked growth in the size of the total staff, the number of prospective teachers has represented a gradually increasing proportion of the total staff size. A slight moderation in this proportion occurred at the high-school level in 1961-62, a year having a marked increase in the growth of the secondary-school staff. The proportions reached record levels in 1968-69 and have established new records each succeeding year.

### Supply of New Teachers Compared with Demand (QCE)

The estimated total supply of new teachers compared with the estimated total demand for new teachers based on the Quality Criterion is shown as follows:

	<u>Number of new teachers</u>		
	<u>Elemen-</u> <u>tary</u>	<u>Second-</u> <u>tary</u>	<u>Total</u>
Estimated demand (Quality Criterion)	255,350	191,150	446,500
Estimated supply*	133,378	155,956	289,334
Shortage .....	121,972	35,194	157,166

\*Re-entry of former teachers equal to 3.2 percent of the number of full-time elementary- and 3.0 percent of the number of full-time secondary-school teachers in fall 1969. Entry into teaching by 83.2 percent of graduates prepared to teach at the elementary-school level and by 75.0 percent of graduates prepared to teach at the secondary-school level. Supply in special education apportioned between elementary and secondary.

The estimate shows a shortage of 157,000 teachers with the need being critical at the elementary-school level. It is difficult to estimate the number of qualified teachers who may be available for entry in the event that schools were financially able and had the facilities to employ the 446,500 persons estimated in the demand for new teachers. Therefore, this estimated shortage should be interpreted only in general terms.

### Supply Compared with Demand (ATCE) for Beginning Teachers

A very general estimate of the status of teacher supply and demand in 21 states in 1969 is provided in Tables 18 and 19. The problem of nonresident enrollments and migration has reduced the precision of estimates of the supply of beginning teachers for this group of

TABLE 19.--TEACHER EDUCATION GRADUATES AS PERCENT OF NEW TEACHERS EMPLOYED IN  
SELECTED STATES, 4-YEAR INTERVALS BETWEEN 1948-49 AND 1968-69, AND IN 1969-70

Level and subject	Percent of new teachers represented by number of teacher education graduates						
	1948-49	1952-53	1956-57	1960-61	1964-65	1968-69	1969-70
1	2	3	4	5	6	7	8
ELEMENTARY (total) .....	29.7%	55.6%	48.0%	58.2%	70.3%	88.5%	89.3%
SECONDARY-SCHOOL SUBJECTS (total) ...	111.7	131.7	111.4	119.1	131.3	126.0	121.2
Agriculture .....	136.6	163.8	163.9	184.3	176.8	195.8	149.9
Art .....	117.1	264.5	139.5	154.4	165.4	140.9	160.9
Business education .....	103.0	147.1	134.2	158.5	168.7	190.2	181.1
English .....	95.8	105.9	73.0	73.7	95.9	119.6	104.4
Foreign languages .....	171.1	213.3	120.1	76.1	106.6	140.6	151.7
Home economics .....	114.6	137.9	128.3	141.7	170.6	180.3	210.4
Industrial arts .....	103.9	166.5	123.5	169.0	121.3	150.9	114.5
Journalism .....	103.3	82.1	78.4	59.2	93.8	a/	a/
Library science .....	65.5	69.6	35.0	27.9	39.1	170.0	55.4
Mathematics .....	73.6	108.8	58.2	73.1	79.6	79.1	60.6
Music .....	105.9	164.9	127.2	174.5	171.0	170.1	159.5
Physical education--men .....	148.1	278.9	185.0	286.0	283.0	206.7	200.7
Physical education--women .....	138.6	169.6	126.3	117.0	128.7		
General science .....	62.3	79.4	54.8	67.8	50.7		
Biology .....	114.8	270.9	199.3	143.3	246.2		
Chemistry .....	135.9	200.0	107.8	107.3	112.2	87.	71.9
Physics .....	65.1	120.1	80.2	79.3	119.0	175.6	162.3
Social studies .....	157.1	207.3	164.1	153.1	186.4		
Speech .....	126.2	313.8	256.9	260.8	469.5	a/	a/
Other (special education, junior high school, vocational, dis- tributive education, guidance) ..	...	246.7	40.8	73.6	87.0	45.8	111.7
Number of states reporting .....	21	26 + Alaska Hawaii D.C.	32 + Alaska D.C.	26 + D. C.	27+ D. C.	23+ D. C.	21

a/ Included with English.

states. If it is assumed that the reporting states are representative of the nation in the pattern of demand for new teachers among the subject fields, this pattern may be used with the national estimated demand for beginning teachers to obtain a national estimate of demand which is comparable with the national summary of the supply of beginning teachers by subject areas.

Listed in Table 21 are the estimated numbers of beginning teachers who will be available for entry into classrooms in fall 1970, the estimated demand for beginning teachers, the difference between the estimated supply and the estimated demand for beginning teachers, and the estimated number of former teachers expected to return to classrooms in fall 1970. The estimates of demand are based on the Adjusted Trend Criterion which projects the actual number of positions to be filled in

fall 1970. The differences listed in columns 5 and 6 show the adequacy of the 1970 supply of beginning teachers in each assignment. The estimates in columns 3 and 5 are based on an assumption that the average rates of teacher turnover and re-entry are equally applicable among the subject areas. In subjects in which the rate of teacher separation is about average and the re-entry rate is lower than average, the demand for beginning teachers would be greater than the level estimated. For example, the supply of qualified personnel in the pool of former teachers may not be as adequate in some subjects as in others. In the subjects having a relatively limited supply of qualified former teachers the demand for beginning teachers would be increased.

Also, changes in the general status of employment opportunities for persons having the

college degree may influence the turnover and re-entry rate observed in earlier years. The reduced availability of positions in other occupations may decrease the loss to the profession of teachers presently employed as well as increase the number of former teachers who may be considering re-entry into the profession. This general economic condition may decrease the demand for beginning teachers below the levels estimated in both column 3 and column 4 of Table 21. The numbers of former teachers expected to re-enter classrooms in

fall 1970 following an interruption of at least one year are listed in columns 7 and 8 of Table 21. These show the estimated additional numbers of beginning teachers which would be needed if no former teachers re-entered classrooms in fall 1970.

The range of error in the information and in the assumptions leading to these estimates of supply and demand for beginning teachers requires that the numerical data be interpreted only in general terms. Therefore, the

TABLE 20.--ESTIMATES OF THE TOTAL NUMBER OF PUBLIC-SCHOOL TEACHERS AND THE NUMBER OF TEACHER EDUCATION GRADUATES READY FOR EMPLOYMENT EACH YEAR SINCE 1955-56

Session	Total teachers	Elementary		Total teachers	Secondary	
		Teacher education grad- uates of previous year			Teacher education grad- uates of previous year	
		Number	Percent of total		Number	Percent of total
1	2	3	4	5	6	7
1955-56 .....	733,000	37,712	5.1%	408,000	49,697	12.2%
1956-57 .....	751,000	40,801	5.4	447,000	56,785	12.7
1957-58 .....	786,000	44,029	5.6	473,000	65,062	13.8
1958-59 .....	815,000	45,318	5.3	491,000	69,093	14.1
1959-60 .....	832,000	47,836	5.7	524,000	71,585	13.7
1960-61 .....	858,000	52,630	6.1	550,000	77,573	14.1
1961-62 .....	869,000	51,866	6.0	592,000	77,322	13.1
1962-63 .....	886,000	57,854	6.5	621,000	84,489	13.6
1963-64 .....	900,000	61,979	6.8	669,000	96,378	14.4
1964-65 .....	940,000	72,581	7.7	708,000	101,552	14.3
1965-66 .....	965,000	77,773	8.1	746,000	112,436	15.1
1966-67 .....	1,006,000	77,703 <sup>a/</sup>	7.7	783,000	122,208 <sup>a/</sup>	15.6
1967-68 .....	1,040,000 <sup>b/</sup>	76,607 <sup>c/</sup>	7.4	815,000 <sup>b/</sup>	121,554 <sup>a/c/</sup>	14.9
1968-69 .....	1,076,000 <sup>b/</sup>	91,336 <sup>a/</sup>	8.5	860,000 <sup>b/</sup>	143,611 <sup>a/</sup>	16.7
1969-70 .....	1,108,000 <sup>b/</sup>	103,654 <sup>a/</sup>	9.4	906,000 <sup>b/</sup>	162,607 <sup>a/</sup>	17.9
1970-71 .....	1,115,000 <sup>d/</sup>	109,888 <sup>a/</sup>	9.9	934,000 <sup>d/</sup>	182,746 <sup>a/</sup>	19.6

Source of staff size: U.S. Department of Health, Education, and Welfare, Office of Education. Projections of Educational Statistics to 1977-78. Washington, D.C.: Government Printing Office, 1969. Table 23. (Fall staff size includes number of part-time teachers.)

a/ Persons prepared to teach specific subjects, librarians, and guidance counselors are classified as secondary, consistent with practice in earlier years. Persons prepared to enter employment as school psychologists, school social workers, school nurses, and other ungraded assignments are not included.

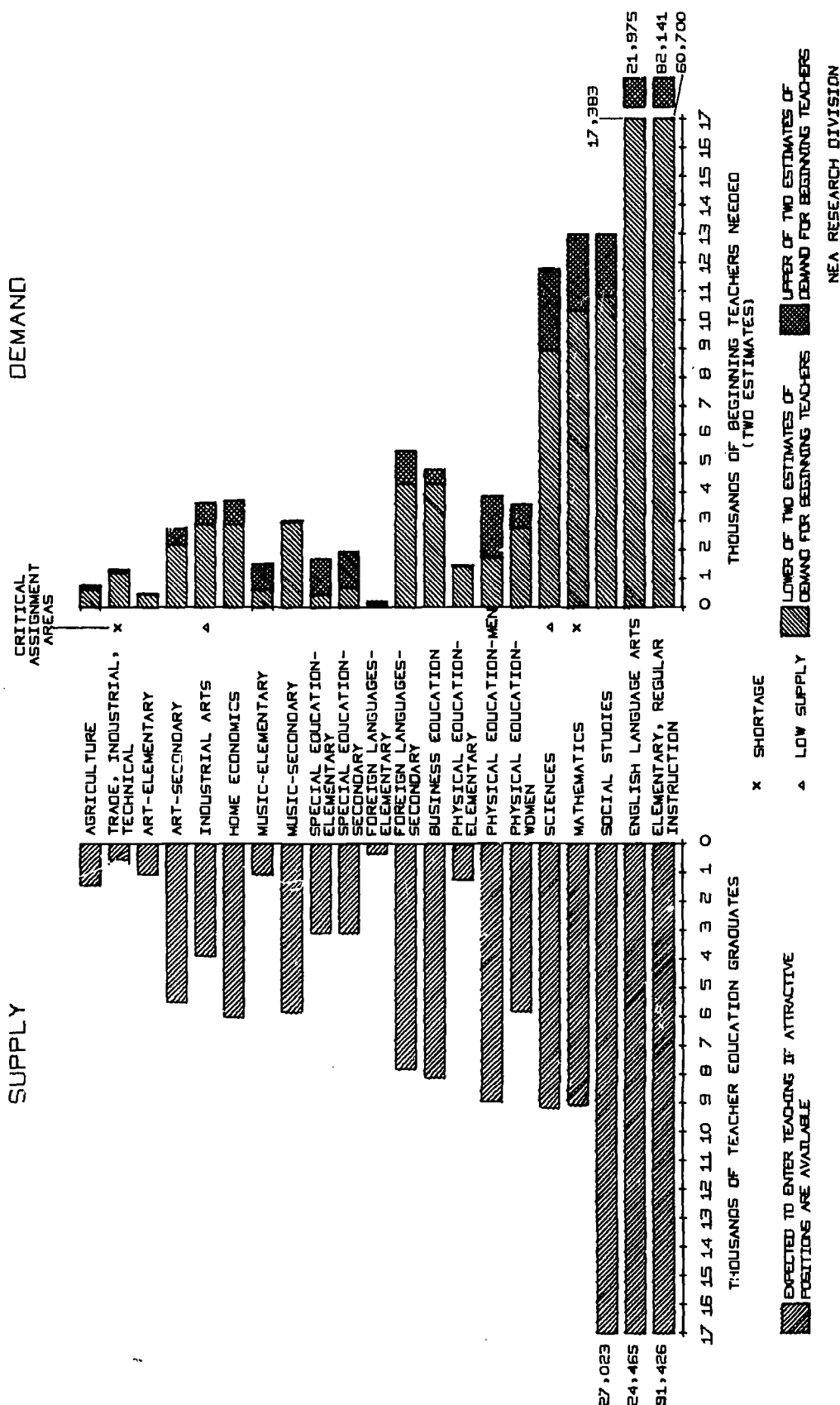
b/ U.S. Department of Health, Education, and Welfare, Office of Education. Statistics of Public Elementary and Secondary Day Schools, Fall 1969. Washington, D.C.: Government Printing Office, 1970. Table 1.

c/ Estimate may be from 2 to 6 percent lower than actual numbers owing to incomplete reports in two states.

d/ Projection.



FIGURE IV  
SUPPLY AND DEMAND FOR BEGINNING TEACHERS, BY TYPE OF  
ASSIGNMENT, ADJUSTED TREND CRITERION ESTIMATE, 1970



numerical differences provide only a suggestion of the comparative impact of supply and demand conditions in the various subject areas.

A summary of the ranked placement of the subject areas of teacher preparation in terms of the estimated condition of the supply and demand for beginning teachers is given in Table 22. The estimate of general condition is based on a combination of the information listed in columns 2 through 6.

The numerical differences between the estimated supply and the two estimates of the demand for beginning teachers (columns 2 and 3) show the condition of each assignment if the factors related to supply and demand operate as reported last year. The enlargement, rate of teacher turnover, and extent of re-entry of staff were influenced by some shortages in 1969 as well as continuation of the chronic shortages of qualified persons in several assignments. Possibly the pattern of the numbers of

TABLE 21.--COMPARISON OF THE ESTIMATED SUPPLY OF BEGINNING TEACHERS WITH THE ADJUSTED TREND CRITERION ESTIMATE OF DEMAND FOR BEGINNING TEACHERS AND FOR NEW TEACHERS IN 1970, BY ASSIGNMENT

Assignment	Estimated supply of beginning teachers	Estimated demand for beginning teachers		Difference between supply and demand for beginning teachers		Number of former teachers expected to re-enter classrooms	
		Distribution last year	Estimated national distribution	Distribution last year	Estimated national distribution	Distribution last year	Estimated national distribution
1	2	3	4	5	6	7	8
ELEMENTARY (total) ....	( 98,278)	(60,700)	(82,141)	(37,578)	(16,137)	(35,100)	(72,676)
Regular instruction.	91,426	55,480	70,918	35,946	12,508	32,082	69,984
Selected subjects:							
Art .....	1,074	486	484	588	590	280	194
Foreign language.	344	60	198	284	146	36	100
Music .....	1,073	1,517	626	-444	447	878	909
Physical and health education.	1,255	1,457	1,455	-202	-200	842	1,219
Special education	3,106	1,700	460	1,406	2,646	982	270
SECONDARY (total) ....	(128,956)	(78,300)	(95,468)	(50,656)	(33,488)	(27,000)	(53,255)
Agriculture .....	1,441	783	625	658	816	270	458
Art .....	5,507	2,192	2,747	3,315	2,760	756	1,116
Business education .	8,120	4,306	4,799	3,814	3,321	1,486	3,405
Distributive education .....	439	235	...	204	...	81	...
English language arts .....	24,465	17,383	21,975	7,082	2,490	5,994	12,850
Foreign language ...	7,832	4,306	5,447	3,526	2,385	1,486	3,556
Home economics ....	6,029	2,897	3,717	3,132	2,312	999	2,873
Industrial arts ....	3,893	2,897	3,638	996	255	999	2,508
Junior high school .	481	a/	...	...	...	...	...
Mathematics .....	9,070	10,336	12,970	-1,266	-3,900	3,564	6,622
Music .....	5,841	2,975	3,035	2,866	2,806	1,026	1,941
Physical and health education--men ...	8,959	3,882	1,760	5,077	7,199	1,336	1,825
Physical and health education--women .	5,814	2,774	3,569	3,040	2,245	959	1,337
Natural and physical sciences .....	9,175	8,926	11,767	249	-2,592	3,078	6,764
Social studies ....	27,023	10,805	12,969	16,218	14,054	3,726	5,664
Trade, industrial, vocational, technical .....	550	1,331	1,206	-781	-656	459	602
Special education ..	3,100	1,958	700	1,142	2,400	675	287
Other subjects ....	1,217	314	4,544	903	3,327	106	271

a/ Information from 11 states was distributed equally among English language arts, mathematics, natural and physical sciences, and social sciences.

TABLE 22.--SUMMARY OF ESTIMATED SUPPLY COMPARED WITH THE ADJUSTED TREND CRITERION  
ESTIMATE OF DEMAND FOR BEGINNING TEACHERS IN 1970, ELEMENTARY-SCHOOL  
AND SECONDARY-SCHOOL SUBJECT AREAS, BY GENERAL CONDITION

Assignment	Numerical difference in the estimated sup- ply of beginning teachers and estimated <u>demand based on</u> Percent dis-tribution in 1969	National estimate	Percent of teach- er educa- tion grad- uates en- tering the pro- fession	Estimated additional supply if 80.0 per- cent of graduates entered	Additional demand if estimated re-entry rate is reduced by 10%	General condition
1	2	3	4	5	6	7
Mathematics .....	-1,266	-3,900	71.2%	605	356	Shortage
Trade, industrial, vo- cational, technical .	-781	-656	41.0	37	46	Shortage
Natural and physical sciences .....	+249	-2,592	63.9	612	308	Low supply
Industrial arts .....	996	255	70.2	260	100	Low supply
Special education						
Elementary .....	1,406	2,646	68.3	...	98	Near balance
Secondary .....	1,142	2,400	68.3	...	68	Near balance
Distributive education.	204	...	69.1	29	8	Near balance
Agriculture .....	658	816	52.7	96	27	Adequate supply
Art						
Elementary .....	588	590	57.4	...	28	Adequate supply
Secondary .....	3,315	2,760	63.2	367	76	Adequate supply
Business education ...	3,814	3,321	58.6	541	149	Adequate supply
Elementary, regular instruction .....	35,946	12,508	74.5	...	3,208	Adequate supply
English language arts .	7,082	2,490	63.5	1,631	599	Adequate supply
Foreign languages						
Elementary .....	284	146	77.0	...	4	Adequate supply
Secondary .....	3,526	2,385	59.7	522	149	Adequate supply
Home economics .....	3,132	2,312	59.2	402	100	Adequate supply
Music						
Elementary .....	-444	447	64.8	...	88	Adequate supply
Secondary .....	2,866	2,806	69.8	389	103	Adequate supply
Physical and health education						
Elementary .....	-202	-200	70.5	...	84	Adequate supply
Secondary--Men .....	5,077	7,199	65.1	597	134	Adequate supply
Women ....	3,040	2,245	68.5	388	96	Adequate supply
Social studies .....	16,218	14,054	55.2	1,802	373	Adequate supply

new teachers in the assignments would have been different if the supply of beginning teachers were more than adequate for each assignment.

The percent of qualified graduates entering the profession last year (column 4) provides an indication of the relative supply-demand condition among the assignments as well as a view of possible availability of qualified persons from earlier graduating classes. The size of these pools of qualified beginning teachers may be least adequate in the subject areas having the highest proportions of graduates entering the profession immediately subsequent to their graduation. The reduction in recent years of

the entry rate of graduates prepared to teach suggests that these pools are enlarging at an accelerated rate.

The additional supply of beginning teachers from the 1970 graduating class if 80.0 percent of the graduates enter teaching (column 5) shows an estimate of the potential supply which may be tapped, if attractive positions are open. The rate projected, 80.0 percent, is above the average reported for all teacher education graduates in recent years; but is lower than that observed among graduates prepared to enter elementary-school assignments during periods of shortage. It is assumed that this rate may be

attained among graduates prepared for any assignment if employment opportunities are available and attractive.

The information in column 6 shows the additional demand for beginning teachers which could result from a small change in the estimated re-entry rate of former teachers. The reduction of 10 percent in the estimated re-entry rate would deepen the shortage of beginning mathematics teachers by about 356 persons. This and the relatively small numbers involved in the other assignments provide a basis for interpreting the significance of the estimated numerical comparison of the supply and demand for beginning teachers. The estimate in column 6 is related to the numerical estimate in column 2 in that both are based on the assumption that the rate of re-entry of former teachers is the same for each teaching assignment.

The summary in column 7 of Table 22 shows that based on the Adjusted Trend Criterion Estimate of demand the shortage of new teachers is continuing in mathematics and in trade-industrial-vocational-technical subjects. Limited supply compared with demand is estimated in the total natural and physical sciences and in industrial arts. Comparisons based on limited information suggest that the supply of

beginning teachers is not as large as needed in subject-area assignments in elementary schools. Local shortages may be observed in other assignments despite the estimate of adequate supply for beginning teachers in these fields.

The estimates of conditions shown in Table 22 are based on a continuation of gradual movement in the improvement in educational staffing toward the standards described in the Quality Criterion Estimate. Acceleration of movement toward improved quality will increase the demand for beginning teachers.

#### Summary of Comparisons Between Estimates of Teacher Supply and Demand

Table 23 summarizes the comparisons between the estimated supply of beginning teachers and the three estimates of demand for beginning teachers. The estimated total supply of beginning teachers is greater than the two estimates of the demand projected by the Adjusted Trend Criterion Estimate but is inadequate to meet the requirements of the Quality Criterion Estimate. However, shortages are estimated in mathematics and in vocational-technical courses. Low supply is estimated in the sciences and in industrial arts. Intensification of shortages

FIGURE V  
ESTIMATES OF SUPPLY OF TEACHER EDUCATION GRADUATES  
AND DEMAND FOR BEGINNING TEACHERS, 1970-71

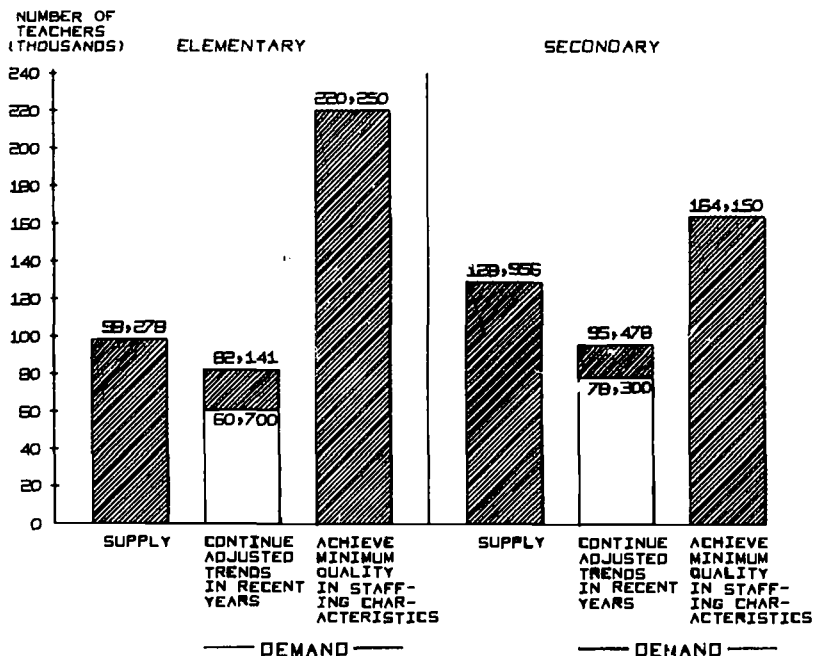


TABLE 23.--SUMMARY OF THE COMPARISONS OF ESTIMATED SUPPLY WITH THE  
ESTIMATES OF DEMAND FOR BEGINNING TEACHERS, 1970-71

Level and criterion for estimate	Supply of beginning teachers	Demand for beginning teachers	Difference	Supply as percent of demand
1	2	3	4	5
ELEMENTARY SCHOOL				
Adjusted Trend Criterion				
Distribution of new teachers last year .....	98,278	60,700	+37,578	161.9%
Estimated national distribution	98,278	82,141	+16,137	119.6
Quality criterion .....	98,278	220,250	-121,972	44.6
SECONDARY SCHOOL				
Adjusted Trend Criterion				
Distribution of new teachers last year .....	128,956	78,300	+50,656	164.7%
Estimated national distribution	128,956	95,468	+33,488	135.1
Quality criterion .....	128,956	164,150	-35,196	78.6
TOTAL				
Adjusted Trend Criterion				
Distribution of new teachers last year .....	227,234	139,000	+88,234	163.5
Estimated national distribution	227,234	177,609	+49,625	127.9
Quality criterion .....	227,234	384,400	-157,166	59.1

estimated in these fields and creation of shortages in some others may result from acceleration in progress toward improved quality in educational staffing.

#### Supply and Demand for School Librarians and Guidance Counselors

The estimated supplies of beginning school librarians and guidance counselors were listed in Table 1B. The Quality Criterion Estimate of demand and the Adjusted Trend Criterion Estimate of demand for new persons in these assignments were reviewed. The table in column 2 summarizes and compares these estimates.

These estimates show that the supply of beginning staff for these positions is far below the numbers needed to attain minimum quality in this phase of educational staffing. However, it is estimated that the supply of beginning librarians expected to enter the profession will be slightly lower than the demand for them to fill positions in fall 1970. The estimated supply of beginning guidance counselors seems to be adequate for the projected demand for them in fall 1970.

	Number of staff	
	<u>School librarians</u>	<u>Guidance counselors</u>
Estimated supply of beginning staff in fall 1970* .....	1,625	2,959
Quality Criterion Estimate of demand for new staff, exclusive of the number needed to replace those who leave .	115,420	23,862
Difference .....	113,795	20,903
Adjusted Trend Criterion Estimate of demand in 1970		
For new staff .....	3,354	1,406
For beginning staff	1,811	415
Difference .....	-186 to -1,729	+1,553 to +2,544

\*Based on entry of 75.0 percent of persons completing preparation to become school librarians or guidance counselors.



## EDUCATION COMPLETED BY PUBLIC-SCHOOL TEACHERS

THE COMPLETION of a bachelor's degree with an emphasis on preparation for teaching has been widely accepted as a minimum educational requirement for becoming an effective teacher. The completion of a master's degree is increasingly being used as the minimum level of educational preparation to be expected of persons considered to be fully qualified teachers. This section reviews the status and trends in the accomplishment of these two levels of academic preparation among public-school teachers. Also given is information from the states that reported information about the highest level of education completed by their new teachers and by the entire teaching staffs of their public elementary and secondary schools.

### Trends in Academic Preparation Completed

Estimated distributions of public-school teachers by their highest earned degrees as established in 11 national sampling surveys are given in Table 24. The 1955-56 survey contained a slightly higher than representative percent of NEA members which may have introduced a slight bias toward higher preparation. During the past 10 years, marked improvement is noted in the proportions of elementary-school teachers

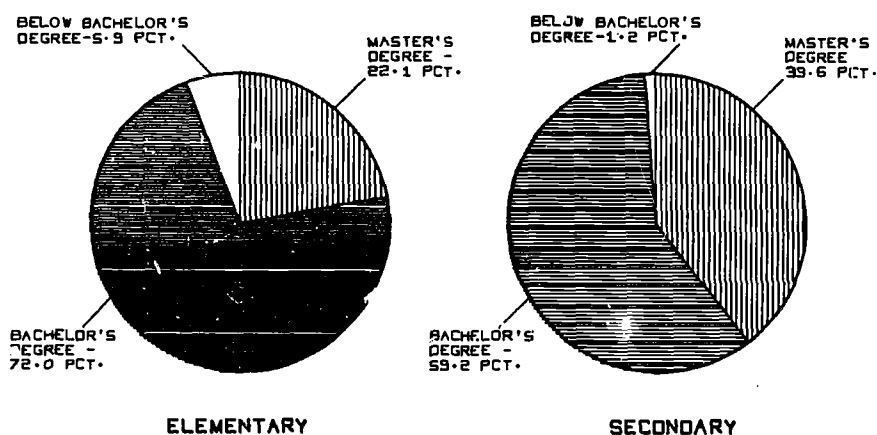
who have completed at least the bachelor's degree. However, the pace of this trend was reduced between 1965-66 and 1966-67; possibly this is an outcome of the unusual shortages reported in fall 1966. At the secondary-school level near the end of this 10-year period there has been improvement in the proportion of public-school teachers who have earned the master's degree.

### Differences Among the States

Among the 28 states reporting information for 1969-70, marked differences are observed in the proportion of elementary-school teachers who have completed the bachelor's degree, shown in Table 25. Six states report that more than 10 percent do not have the bachelor's degree.

Wide differences are noted among the 28 reporting states in the proportion of elementary-school teachers who have completed the master's degree, also shown in Table 25. Four of these states report that more than one-fourth have the master's degree. On the other hand, in five states less than 10 percent have completed the master's degree. Three states report more

FIGURE VI  
ESTIMATED NATIONAL DISTRIBUTION OF PUBLIC-SCHOOL TEACHERS BY  
THEIR HIGHEST LEVEL OF ACADEMIC PREPARATION, 1969-70



NEA RESEARCH DIVISION

TABLE 24.--DISTRIBUTION OF PUBLIC-SCHOOL TEACHERS BY HIGHEST DEGREE EARNED, SELECTED YEARS

School year	All teachers			Elementary-school teachers			Secondary-school teachers		
	No degree	Bachelor's degree	Master's or higher degree	No degree	Bachelor's degree	Master's or higher degree	No degree	Bachelor's degree	Master's or higher degree
1	2	3	4	5	6	7	8	9	10
1930-31 ...	70.0%	(— 30.0% —)	...	...	...	...	...	...	...
1947-48 ...	40.6	43.3%	15.1%	...	...	...	...	...	...
1955-56 ...	22.2	53.2	24.6	34.1%	53.1%	12.8%	3.0%	53.3%	43.7%
1960-61 ...	14.6	61.9	23.5	23.8	62.2	14.0	2.3	61.6	36.1
1962-63 ...	10.9	64.5	24.6	17.6	65.0	17.4	1.9	63.9	34.2
1964-65 ...	8.6	67.3	24.1	15.1	70.8	14.1	1.7	63.5	34.8
1965-66 ...	6.6	67.2	26.2	10.9	70.9	18.2	2.1	63.2	34.7
1966-67 ...	6.1	68.2	25.7	10.3	72.9	16.8	1.5	63.0	35.5
1967-68 ...	4.7	67.4	27.9	8.0	73.2	18.9	1.4	61.4	37.2
1968-69 ...	4.5	65.2	30.3	7.8	71.1	21.1	1.1	59.1	39.8
1969-70 ...	3.6	65.8	30.6	5.9	72.0	22.1	1.2	59.2	39.6

**Sources:**

1930-31: Evenden, E. S. National Survey of the Education of Teachers: Summary and Interpretation. U. S. Department of the Interior, Office of Education, Bulletin 1933, No. 10, Vol. VI. Washington, D. C.: Government Printing Office, 1935.

1947-48: National Education Association, Research Division. "Teachers in the Public Schools." Research Bulletin 27: 133; December 1949.

1955-56: National Education Association, Research Division. "The Status of the American Public-School Teacher." Research Bulletin 35: 15; February 1957.

1960-61: National Education Association, Research Division. The American Public-School Teacher, 1960-61. Research Monograph 1963-M2. Washington, D. C.: the Association, April 1963. p. 91.

1962-63 through 1969-70: National Education Association, Research Division, unpublished status information obtained from periodic sampling surveys.

than 1 percent having completed less than two years of college preparation.

Information about the preparation level of secondary-school teachers by state is shown also in Table 25. In one of the 28 reporting states all have the bachelor's or higher degree, and in nine additional states the small numbers lacking this level of preparation represent less than 1 percent of the number of secondary-school teachers. At the other extreme, in three states more than 1 percent have not completed two years of college preparation.

The percents of secondary-school teachers having at least the master's degree range from 15.3 to 68.0. In two of the 26 reporting states, more than half have completed at least the master's degree. On the other hand, in four of these states less than one-fourth have completed this level of preparation.

**Preparation of New Teachers**

The level of preparation completed by teachers entering or re-entering full-time employment provides an indication of the extent school

systems are able to find fully qualified persons to fill vacated or new positions. An inadequate supply of qualified teachers or limited attraction of employment in education for qualified personnel may be reflected in the employment of persons having below-average or sub-standard qualifications. The comparison of the educational qualifications of new teachers with those of the total number of teachers in service provides an indication of whether the persons being employed are raising or lowering the quality of the total staff.

Table 26 shows the percents of new teachers in elementary and secondary schools who have completed selected levels of preparation in each of the 24 states reporting. In only six states does the percent of new elementary-school teachers having the master's degree exceed 10 percent of all new elementary-school teachers. At the secondary-school level, possession of the master's degree by more than 10 percent of the new teachers is reported by 10 of the 24 states.

At the other extreme in adequacy of preparation, the percent of new elementary-school teachers having less than two years of college preparation exceeded 1 percent in three of the

**TABLE 25.—PERCENT OF ALL ELEMENTARY AND ALL SECONDARY-SCHOOL TEACHERS IN 28 STATES HAVING MASTER'S DEGREE, BACHELOR'S OR HIGHER DEGREE, AND LESS THAN TWO YEARS' COLLEGE, 1969-70**

State	All elementary-school teachers					All secondary-school teachers				
	Master's or higher degree		Bachelor's or higher degree		Less than 2 years' college	Master's or higher degree		Bachelor's or higher degree		Less than 2 years' college
	Percent	Rank	Percent	Rank		Percent	Rank	Percent	Rank	
1	2	3	4	5	6	7	8	9	10	11
Alabama .....	17.0%	10.5	93.5%	19	0.8%	29.3%	12	97.7%	21	0.5%
Arkansas .....	15.9	13	97.1	13	*	26.2	20	99.1	9.5	*
Colorado .....	19.5	8	99.1	5	0.1	36.7	7	99.3	7	0.1
Connecticut .....	28.7	3	97.4	12	0.2	47.6	3	99.4	5.5	0.1
Delaware .....	15.0	16	95.5	16	a/	32.7	10	96.5	2.5	a/
Georgia .....	11.3	20	98.6	7	...	31.4	11	98.7	13	...
Hawaii <sup>b/</sup> .....	8.8	24	98.8	6	...	17.1	25	99.2	8	...
Idaho .....	a/	...	84.5	26.5	0.1	a/	...	98.0	19.5	0.1
Illinois <sup>c/</sup> .....	15.6	14	100.0	1	...	38.2	5	100.0	1	...
Kansas .....	43.5	1	96.2	15	0.4	63.5	2	99.4	5.5	...
Louisiana .....	20.0	7	93.7	18	0.6	33.1	8	98.3	11.5	0.2
Maryland .....	13.0	19	90.0	22	2.0	25.8	21	97.2	22.5	0.7
Massachusetts .....	17.3	9	92.8	20	...	27.0	17	99.1	9.5	...
Mississippi .....	10.6	22	97.5	11	0.1	15.3	26	98.3	16	*
Missouri <sup>d/</sup> .....	21.3	6	96.5	14	0.3	41.0	4	97.2	22.5	2.0
Nevada .....	17.0	10.5	94.0	17	a/	68.0	1	98.2	17.5	a/
New Hampshire .....	9.2	23	84.5	26.5	0.2	25.2	22	96.1	26	0.9
New Mexico .....	24.9	5	99.9	2	...	38.1	6	99.6	3	0.2
Oklahoma .....	25.5	4	99.8	3	...	28.7	15	98.5	15	...
Rhode Island .....	15.4	15	97.9	9	...	29.0	13.5	96.8	24	...
Tennessee .....	14.3	17	85.6	25	0.5	29.0	13.5	98.8	11.5	0.1
Texas .....	33.3	2	98.5	8	...	...	...	...	...	...
Vermont .....	8.1	26	79.9	28	4.8	22.8	23	94.2	27	2.8
Virginia .....	8.7	25	90.1	21	2.3	20.9	24	98.0	19.5	1.8
Washington .....	16.2	12	97.7	10	a/	33.0	9	99.5	4	a/
West Virginia .....	14.0	18	87.3	24	0.2	26.9	18	98.2	17.5	...
Wisconsin .....	11.2	21	88.7	23	0.3	28.1	16	98.6	14	0.2
Wyoming .....	7.9	27	99.4	4	...	26.5	19	99.9	2	...

\* Less than 1/10 of 1 percent.

a/ Data not available in this classification.

b/ Teachers whose preparation level is not known are not included.

c/ Excluding greater Chicago.

d/ Data are for 1968-69.

**TABLE 26.—PERCENT OF NEW ELEMENTARY AND NEW SECONDARY-SCHOOL TEACHERS HAVING MASTER'S DEGREE, BACHELOR'S OR HIGHER DEGREE, AND LESS THAN TWO YEARS' COLLEGE, 1969-70, IN 24 STATES**

State	New elementary-school teachers					New secondary-school teachers				
	Master's or higher degree		Bachelor's or higher degree		Less than 2 years' college	Master's or higher degree		Bachelor's or higher degree		Less than 2 years' college
	Percent	Rank	Percent	Rank		Percent	Rank	Percent	Rank	
1	2	3	4	5	6	7	8	9	10	11
Alabama .....	8.7%	8	91.9%	21	1.3%	10.3%	10	94.8%	22	1.4%
Arkansas .....	5.1	12	96.2	16	0.2	7.8	12	99.9	4	...
Colorado .....	4.2	14	99.4	7	0.1	6.6	15	98.4	12	0.6
Connecticut .....	11.0	5	97.4	12	...	21.5	3	98.7	9	0.1
Delaware .....	7.5	11	96.8	14	a/	12.8	9	96.1	20	a/
Hawaii .....	13.6	3	99.9	4.5	...	20.5	4	99.4	6	...
Idaho .....	a/	...	87.9	22	0.1	a/	...	98.5	11	...
Illinois <sup>b/</sup> .....	8.6	9.5	100.0	2	...	8.8	11	100.0	2	...
Kansas .....	13.9	2	98.7	8	0.1	30.7	2	99.1	7	...
Louisiana .....	3.9	15	92.0	20	1.0	6.8	14	96.5	16.5	0.5
Maryland .....	8.6	9.5	95.9	18	0.6	13.9	8	96.1	20	1.4
Mississippi .....	3.8	16	96.9	13	0.1	5.2	18	96.1	20	...
Missouri <sup>c/</sup> .....	10.3	6	94.2	19	0.7	19.2	5	94.6	23	3.2
Nevada .....	16.1	1	100.0	2	a/	61.7	1	100.0	2	a/
New Hampshire .....	3.3	17	96.6	15	0.5	7.0	13	96.8	14	0.4
New Mexico .....	11.3	4	99.8	6	...	16.1	7	98.8	8	0.8
Oklahoma .....	1.8	19	99.9	4.5	...	2.2	21	96.2	18	...
Rhode Island .....	1.4	20	98.4	9	...	5.3	17	99.7	5	...
Tennessee .....	1.3	21	84.7	24	2.1	3.6	20	96.6	15	0.2
Virginia .....	2.1	18	98.1	10	1.9	4.4	19	96.5	16.5	3.5
Washington .....	8.9	7	97.9	11	a/	16.2	6	98.6	10	a/
West Virginia .....	0.7	23	87.2	23	...	1.4	23	97.0	13	...
Wisconsin .....	4.3	13	96.0	17	0.1	2.0	22	88.7	24	0.2
Wyoming .....	0.9	22	100.0	2	...	5.6	16	100.0	2	...

a/ Data not available in this classification.

b/ Excluding greater Chicago.

c/ Data are for 1968-69.

24 states reporting this information. The percent of new secondary-school teachers having less than two years of college preparation exceeded 1 percent in four of the 24 states reporting this information.

Comparison of information in Tables 25 and 26 for individual states reporting the educational qualifications of new teachers and all teachers provides an indication of the influence of the educational qualifications of new teachers upon the qualifications of the total staff in these states.

The quality of the total staff is likely to have been improved where the percent of new teachers having the bachelor's or higher degree is at least 3.0 percentage points more than the percent of all teachers having this level of

preparation. This improvement at the elementary-school level is observed in six of the 24 states providing information about new and all elementary-school teachers: Idaho, Maryland, Nevada, New Hampshire, Virginia, and Wisconsin.

The quality of the total staff is likely to have not been improved where the percent of new teachers having the bachelor's or higher degree is at least 3.0 percentage points lower than the percent of all teachers having this level of preparation. This lowering of staff quality at the elementary-school level is not observed in the 24 states providing information about new and all elementary-school teachers. Lowering of quality is suggested in one of the 24 states providing information about new and all secondary-school teachers, Wisconsin.

## APPENDIX

Table A.--Number of Students Completing Preparation for Standard Teaching Certificates, by Type of Preparation, Year, and State .....	57
Table B.--Low, Median, High, and Mean Percents of Teachers Who Were New in 19 States, 1969-70 ...	74
Table C.--Low, Median, High, and Mean Percents of New Teachers Who Were Re-entering Classrooms Following an Interruption of at Least One Year, in 18 States, 1969-70 .....	75
Table D.--Responses to the Special Survey of Teacher Supply and Demand in Summer 1970, by State ....	76
Table E.--State Authorities Who Are Major Contributors to the Study .....	77

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING  
CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE

TYPE OF PREPARATION COMPLETED BY STUDENT	ALABAMA		ALASKA		ARIZONA	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	1,427	1,445	83	68	1,786	1,586
REGULAR INSTRUCTION .....	1,408	1,428	83	68	1,783	1,585
SELECTED SUBJECTS(TOTAL) .....	19	17	...	...	3	1
ART .....	10	2	...	...	...	...
FOREIGN LANGUAGES .....	...	1	...	...	...	...
MUSIC .....	9	14	...	...	1	...
PHYSICAL & HEALTH EDUCATION .....	...	...	...	...	2	1
SECONDARY SCHOOL						
AGRICULTURE .....	70	99	...	...	20	18
ART .....	68	60	...	...	97	92
BUSINESS EDUCATION .....	268	234	...	...	144	136
DISTRIBUTIVE EDUCATION .....	5	1	...	...	14	11
ENGLISH LANGUAGE ARTS(TOTAL) .....	505	496	17	12	294	256
ENGLISH .....	462	454	14	12	235	208
JOURNALISM .....	...	...	...	...	4	6
SPEECH AND DRAMATIC ARTS .....	43	42	3	...	55	42
FOREIGN LANGUAGES(TOTAL) .....	81	88	2	3	109	99
FRENCH .....	29	26	1	3	19	19
GERMAN .....	3	2	1	...	8	7
LATIN .....	1	2	...	...	...	...
RUSSIAN ..	...	...	...	...	3	3
SPANISH .....	14	31	...	...	77	67
OTHER .....	34	27	...	...	2	3
HOME ECONOMICS .....	200	187	3	2	93	97
INDUSTRIAL ARTS .....	27	42	...	...	100	88
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	...	...	...	...
MATHEMATICS .....	258	237	8	4	63	68
MUSIC .....	154	121	3	2	79	64
PHYSICAL & HEALTH EDUCATION .....	525	414	6	3	229	197
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	182	187	6	5	112	84
SUBJECT NOT SPECIFIED .....	31	33	...	...	2	1
GENERAL SCIENCE .....	14	13	1	1	18	14
BIOLOGY .....	125	126	4	2	63	52
CHEMISTRY .....	9	14	1	1	15	12
PHYSICS .....	3	1	...	1	14	5
SOCIAL STUDIES(TOTAL) .....	811	692	20	11	290	248
SUBJECT NOT SPECIFIED .....	260	306	2	2	57	62
HISTORY, GEOGRAPHY .....	420	308	14	9	166	136
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	49	52	2	...	1	...
OTHER SOCIAL STUDIES .....	82	26	2	...	66	50
TRADE, INDUSTRY, TECHNOLOGY .....	7	...	...	...	5	6
OTHER SECONDARY SUBJECTS .....	30	42	...	...	32	30
SECONDARY-SCHOOL TOTAL .....	3,191	2,900	65	42	1,681	1,494
UNGRADED						
SPECIAL EDUCATION .....	11	9	12	11	140	146
LIBRARIAN .....	34	34	...	...	11	21
GUIDANCE COUNSELOR .....	70	133	14	13	210	207
SCHOOL PSYCHOLOGIST .....	15	1	...	...	15	14
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	77	91	...	...	5	24



TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	ARKANSAS		CALIFORNIA		COLORADO	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	1,110	1,030	7,309	6,682	1,467	1,286
REGULAR INSTRUCTION .....	1,083	1,023	6,978	6,305	1,434	1,251
SELECTED SUBJECTS(TOTAL) .....	27	7	331	373	33	35
ART .....	9	7	144	157	6	4
FOREIGN LANGUAGES .....	...	...	114	112	4	12
MUSIC .....	12	...	65	89	17	16
PHYSICAL & HEALTH EDUCATION ....	6	...	8	15	6	3
SECONDARY SCHOOL						
AGRICULTURE .....	57	48	204	116	...	16
ART .....	80	64	383	281	216	210
BUSINESS EDUCATION .....	249	259	204	196	156	165
DISTRIBUTIVE EDUCATION .....	1	2	2	4	29	36
ENGLISH LANGUAGE ARTS(TOTAL) .....	397	389	1,293	1,213	462	525
ENGLISH .....	302	331	1,110	1,088	366	426
JOURNALISM .....	8	6	34	23	2	3
SPEECH AND DRAMATIC ARTS .....	87	52	149	102	94	96
FOREIGN LANGUAGES(TOTAL) .....	46	49	567	513	167	201
FRENCH .....	19	20	195	165	52	59
GERMAN .....	2	1	94	73	14	20
LATIN .....	...	1	10	10	2	4
RUSSIAN .....	...	...	14	7	5	5
SPANISH .....	25	27	246	250	94	113
OTHER .....	...	...	8	8	...	...
HOME ECONOMICS .....	148	155	237	243	70	120
INDUSTRIAL ARTS .....	39	36	205	234	153	116
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	...	...	...	41
MATHEMATICS .....	149	136	305	323	157	159
MUSIC .....	144	129	175	166	158	153
PHYSICAL & HEALTH EDUCATION .....	428	382	607	566	306	358
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	175	179	508	467	172	197
SUBJECT NOT SPECIFIED .....	7	7	90	57	46	55
GENERAL SCIENCE .....	33	31	46	38	9	13
BIOLOGY .....	109	123	300	284	85	101
CHEMISTRY .....	21	14	49	55	23	20
PHYSICS .....	5	4	23	33	9	8
SOCIAL STUDIES(TOTAL) .....	421	436	1,697	1,547	432	554
SUBJECT NOT SPECIFIED .....	342	303	329	237	191	281
HISTORY, GEOGRAPHY .....	59	67	937	965	182	219
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	20	64	228	152	52	25
OTHER SOCIAL STUDIES .....	...	2	203	193	7	29
TRADE, INDUSTRY, TECHNOLOGY .....	...	...	2	5	1	29
OTHER SECONDARY SUBJECTS .....	...	...	36	40	5	16
SECONDARY-SCHOOL TOTAL .....	2,334	2,264	6,425	5,914	2,484	2,896
UNGRADED						
SPECIAL EDUCATION .....	186	139	320	397	172	313
LIBRARIAN .....	4	4	118	111	...	7
GUIDANCE COUNSELOR .....	109	102	300	327	...	101
SCHOOL PSYCHOLOGIST .....	...	...	99	147	...	3
SCHOOL SOCIAL WORKER .....	...	...	35	41	...	...
SCHOOL NURSE .....	...	...	26	19	...	...
OTHER UNGRADED .....	...	...	178	135	...	67

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING  
CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	CONNECTICUT		DELAWARE		DISTRICT OF COLUMBIA	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	2,048	1,770	160	153	377	332
REGULAR INSTRUCTION .....	2,045	1,770	160	153	372	323
SELECTED SUBJECTS(TOTAL) .....	3	...	...	...	5	9
ART .....	3	...	...	...	1	2
FOREIGN LANGUAGES .....	...	...	...	...	...	2
MUSIC .....	...	...	...	...	1	1
PHYSICAL & HEALTH EDUCATION .....	...	...	...	...	3	4
SECONDARY SCHOOL						
AGRICULTURE .....	2	5	4	2	...	...
ART .....	155	126	17	12	24	19
BUSINESS EDUCATION .....	64	39	22	19	29	30
DISTRIBUTIVE EDUCATION .....	18	16	1	...	...	...
ENGLISH LANGUAGE ARTS(TOTAL) .....	397	346	38	28	121	93
ENGLISH .....	396	346	38	26	97	85
JOURNALISM .....	...	...	...	...	...	...
SPEECH AND DRAMATIC ARTS .....	1	...	...	2	24	8
FOREIGN LANGUAGES(TOTAL) .....	184	165	25	17	45	38
FRENCH .....	89	82	11	8	22	20
GERMAN .....	16	8	4	2	2	1
LATIN .....	7	10	...	...	1	...
RUSSIAN .....	3	1	...	...	...	...
SPANISH .....	67	62	10	7	18	17
OTHER .....	2	2	...	...	2	...
HOME ECONOMICS .....	19	14	33	20	8	2
INDUSTRIAL ARTS .....	54	55	...	...	...	...
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	...	...	10	...
MATHEMATICS .....	173	147	17	16	36	13
MUSIC .....	88	85	12	5	21	16
PHYSICAL & HEALTH EDUCATION .....	217	208	51	32	33	38
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	160	143	11	10	29	7
SUBJECT NOT SPECIFIED .....	...	1	...	...	4	4
GENERAL SCIENCE .....	23	26	1	1	...	1
BIOLOGY .....	117	94	8	8	11	1
CHEMISTRY .....	16	12	2	1	8	...
PHYSICS .....	4	10	...	...	6	1
SOCIAL STUDIES(TOTAL) .....	422	334	45	28	147	98
SUBJECT NOT SPECIFIED .....	126	97	16	22	43	19
HISTORY, GEOGRAPHY .....	248	183	26	4	78	67
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	13	8	3	1	20	...
OTHER SOCIAL STUDIES .....	35	46	...	1	6	12
TRADE, INDUSTRY, TECHNOLOGY .....	30	30	...	...	19	9
OTHER SECONDARY SUBJECTS .....	112	89	...	...	1	79
SECONDARY-SCHOOL TOTAL .....	2,095	1,802	276	189	523	442
UNGRADED						
SPECIAL EDUCATION .....	221	182	4	5	97	83
LIBRARIAN .....	65	50	...	...	43	39
GUIDANCE COUNSELOR .....	81	46	...	...	55	24
SCHOOL PSYCHOLOGIST .....	11	5	...	...	10	4
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	7	8	...	...	...	...

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	FLORIDA		GEORGIA		HAWAII	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	2,625	2,481	1,828	1,891	615	495
REGULAR INSTRUCTION .....	2,574	2,432	1,828	1,891	615	495
SELECTED SUBJECTS(TOTAL) .....	51	49	...	...	...	...
ART .....	23	19	...	...	...	...
FOREIGN LANGUAGES .....	...	...	...	...	...	...
MUSIC .....	16	20	...	...	...	...
PHYSICAL & HEALTH EDUCATION .....	12	4	...	...	...	...
SECONDARY SCHOOL						
AGRICULTURE .....	23	17	25	25	1	...
ART .....	186	116	95	96	16	12
BUSINESS EDUCATION .....	193	190	230	165	19	23
DISTRIBUTIVE EDUCATION .....	27	23	14	11	...	...
ENGLISH LANGUAGE ARTS(TOTAL) .....	768	639	466	456	113	66
ENGLISH .....	660	558	446	433	88	45
JOURNALISM .....	25	14	...	2	...	...
SPEECH AND DRAMATIC ARTS .....	83	67	20	21	25	21
FOREIGN LANGUAGES(TOTAL) .....	184	170	140	108	29	16
FRENCH .....	59	51	72	61	9	5
GERMAN .....	11	13	6	4	1	1
LATIN .....	1	7	23	2	...	2
RUSSIAN .....	2	...	...	...	1	1
SPANISH .....	111	99	39	41	10	1
OTHER .....	...	...	...	...	8	6
HOME ECONOMICS .....	90	86	162	146	8	5
INDUSTRIAL ARTS .....	66	52	63	60	13	10
JUNIOR HIGH SCHOOL(GENERAL) .....	...	6	58	80	...	...
MATHEMATICS .....	251	255	245	262	30	26
MUSIC .....	214	195	122	119	18	9
PHYSICAL & HEALTH EDUCATION .....	484	490	283	257	51	39
NATURAL & PHYSICAL SCIENCES (TOTAL) .....	227	164	198	219	19	18
SUBJECT NOT SPECIFIED .....	22	15	44	45	3	...
GENERAL SCIENCE .....	39	35	38	47	4	2
BIOLOGY .....	111	75	88	95	8	11
CHEMISTRY .....	46	34	23	25	3	5
PHYSICS .....	9	5	5	7	1	...
SOCIAL STUDIES(TOTAL) .....	1,072	861	774	620	108	77
SUBJECT NOT SPECIFIED .....	575	522	359	300	37	57
HISTORY, GEOGRAPHY .....	175	121	285	211	59	18
ECONOMICS, SOCIOLOGY, PSYCHOLOGY .....	232	101	56	57	10	1
OTHER SOCIAL STUDIES .....	90	111	74	52	2	1
TRADE, INDUSTRY, TECHNOLOGY .....	60	51	20	8	...	...
OTHER SECONDARY SUBJECTS .....	...	1	...	...	...	...
SECONDARY-SCHOOL TOTAL .....	3,845	3,316	2,895	2,632	425	301
UNGRADED						
SPECIAL EDUCATION .....	312	232	150	137	...	...
LIBRARIAN .....	103	104	29	27	...	...
GUIDANCE COUNSELOR .....	152	126	134	174	...	...
SCHOOL PSYCHOLOGIST .....	...	...	...	...	60	71
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	73	78	829	885	...	...

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING  
CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	IDAHO		ILLINOIS		INDIANA	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	489	497	5,514	4,866	2,846	2,555
REGULAR INSTRUCTION .....	489	497	5,210	4,554	2,823	2,549
SELECTED SUBJECTS(TOTAL) .....	...	...	304	312	23	6
ART .....	...	...	46	73	19	...
FOREIGN LANGUAGES .....	...	...	18	30	...	...
MUSIC .....	...	...	60	63	2	3
PHYSICAL & HEALTH EDUCATION .....	...	...	180	146	2	3
SECONDARY SCHOOL						
AGRICULTURE .....	16	13	140	100	147	...
ART .....	14	20	419	386	180	188
BUSINESS EDUCATION .....	12	39	581	455	285	237
DISTRIBUTIVE EDUCATION .....	24	11	...	...	11	3
ENGLISH LANGUAGE ARTS(TOTAL) .....	65	81	1,737	1,428	966	954
ENGLISH .....	60	74	1,296	1,149	749	770
JOURNALISM .....	...	...	16	14	38	37
SPEECH AND DRAMATIC ARTS .....	5	7	425	265	179	147
FOREIGN LANGUAGES(TOTAL) .....	2	15	655	569	321	334
FRENCH .....	1	12	226	223	129	125
GERMAN .....	...	1	116	71	42	43
LATIN .....	...	...	34	36	29	25
RUSSIAN .....	...	...	19	8	5	12
SPANISH .....	1	2	246	223	116	129
OTHER .....	...	...	14	8	...	...
HOME ECONOMICS .....	11	64	305	291	266	224
INDUSTRIAL ARTS .....	14	13	312	237	207	199
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	119	102	...	...
MATHEMATICS .....	21	33	731	590	333	326
MUSIC .....	25	35	490	379	279	259
PHYSICAL & HEALTH EDUCATION .....	87	140	1,202	930	826	771
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	62	44	525	461	379	348
SUBJECT NOT SPECIFIED .....	8	3	69	61	47	41
GENERAL SCIENCE .....	14	5	14	8	36	27
BIOLOGY .....	34	33	308	278	220	213
CHEMISTRY .....	3	2	81	76	58	49
PHYSICS .....	3	1	53	38	18	18
SOCIAL STUDIES(TOTAL) .....	130	131	1,700	1,440	1,236	1,263
SUBJECT NOT SPECIFIED .....	25	67	338	323	582	600
HISTORY, GEOGRAPHY .....	64	43	917	754	334	348
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	21	12	261	237	203	204
OTHER SOCIAL STUDIES .....	20	9	184	126	117	111
TRADE, INDUSTRY, TECHNOLOGY .....	1	...	...	7	6	6
OTHER SECONDARY SUBJECTS .....	182	9	41	38	45	42
SECONDARY-SCHOOL TOTAL .....	666	648	8,957	7,413	5,487	5,154
UNGRADED						
SPECIAL EDUCATION .....	14	11	638	534	198	181
LIBRARIAN .....	...	...	34	24	102	67
GUIDANCE COUNSELOR .....	11	5	195	289	34	37
SCHOOL PSYCHOLOGIST .....	...	...	...	...	...	...
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	4	3	...	...
OTHER UNGRADED .....	7	8	86	47	35	37

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	IOWA		KANSAS		KENTUCKY	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	2,139	2,212	1,911	1,966	2,123	2,124
REGULAR INSTRUCTION .....	2,046	2,161	1,808	1,893	2,019	2,092
SELECTED SUBJECTS(TOTAL) .....	93	51	103	73	104	32
ART .....	15	6	21	17	...	1
FOREIGN LANGUAGES .....	2	1	...	...	...	...
MUSIC .....	28	2	52	34	11	10
PHYSICAL & HEALTH EDUCATION ....	48	42	30	22	93	21
SECONDARY SCHOOL						
AGRICULTURE .....	74	47	36	26	43	45
ART .....	210	138	130	120	160	148
BUSINESS EDUCATION .....	142	143	161	171	332	300
DISTRIBUTIVE EDUCATION .....	15	10	...	7	6	...
ENGLISH LANGUAGE ARTS(TOTAL) .....	638	666	523	500	684	699
ENGLISH .....	515	544	414	434	601	622
JOURNALISM .....	15	10	6	1	16	14
SPEECH AND DRAMATIC ARTS .....	108	112	103	65	67	63
FOREIGN LANGUAGES(TOTAL) .....	244	234	137	167	119	113
FRENCH .....	77	105	44	92	44	51
GERMAN .....	50	36	23	21	20	14
LATIN .....	5	4	8	2	5	9
RUSSIAN .....	6	1	...	...	1	1
SPANISH .....	106	88	60	49	48	34
OTHER .....	...	...	2	3	1	4
HOME ECONOMICS .....	189	247	194	145	194	181
INDUSTRIAL ARTS .....	82	82	121	139	191	160
JUNIOR HIGH SCHOOL(GENERAL) .....	46	67	10	...	24	34
MATHEMATICS .....	229	227	166	199	189	189
MUSIC .....	212	214	161	172	183	183
PHYSICAL & HEALTH EDUCATION .....	532	476	509	424	527	573
NATURAL & PHYSICAL SCIENCES (TOTAL) .....	264	253	175	180	237	228
SUBJECT NOT SPECIFIED .....	55	19	10	39	20	16
GENERAL SCIENCE .....	43	37	32	32	...	...
BIOLOGY .....	134	153	116	87	163	169
CHEMISTRY .....	17	32	15	17	46	40
PHYSICS .....	15	12	2	5	8	3
SOCIAL STUDIES(TOTAL) .....	717	763	465	489	1,082	911
SUBJECT NOT SPECIFIED .....	245	265	171	199	134	102
HISTORY, GEOGRAPHY .....	325	324	220	231	596	514
ECONOMICS, SOCIOLOGY, PSYCHOLOGY .....	93	109	64	44	273	234
OTHER SOCIAL STUDIES .....	54	65	10	15	79	61
TRADE, INDUSTRY, TECHNOLOGY .....	...	...	3	29	11	13
OTHER SECONDARY SUBJECTS .....	...	...	28	14	13	...
SECONDARY-SCHOOL TOTAL .....	3,594	3,567	2,819	2,782	3,995	3,777
UNGRADED						
SPECIAL EDUCATION .....	119	70	118	61	153	121
LIBRARIAN .....	76	...	33	39	51	43
GUIDANCE COUNSELOR .....	49	...	33	34	36	26
SCHOOL PSYCHOLOGIST .....	11	...	...	10	...	...
SCHOOL SOCIAL WORKER .....	...	...	4	6	1	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	...	...	...	24	...	...

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	LOUISIANA		MAINE		MARYLAND	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	2,008	1,758	523	510	1,795	1,612
REGULAR INSTRUCTION .....	2,008	1,751	522	510	1,702	1,554
SELECTED SUBJECTS(TOTAL) .....	...	7	1	...	93	58
ART .....	...	7	...	...	45	31
FOREIGN LANGUAGES .....	...	...	1	...	...	...
MUSIC .....	...	...	...	...	23	17
PHYSICAL & HEALTH EDUCATION ....	...	...	...	...	25	10
SECONDARY SCHOOL						
AGRICULTURE .....	44	33	...	...	5	8
ART .....	87	44	29	25	132	147
BUSINESS EDUCATION .....	380	252	64	69	46	48
DISTRIBUTIVE EDUCATION .....	20	15	...	...	...	...
ENGLISH LANGUAGE ARTS(TOTAL) .....	484	394	101	2	405	353
ENGLISH .....	355	290	101	...	376	324
JOURNALISM .....	...	...	...	1	...	...
SPEECH AND DRAMATIC ARTS .....	129	104	...	1	29	29
FOREIGN LANGUAGES(TOTAL) .....	172	141	24	...	140	113
FRENCH .....	93	69	20	...	77	64
GERMAN .....	2	4	2	...	10	12
LATIN .....	...	...	...	...	1	4
RUSSIAN .....	...	1	...	...	...	...
SPANISH .....	42	33	2	...	52	33
OTHER .....	35	34	...	...	...	...
HOME ECONOMICS .....	155	175	90	23	79	75
INDUSTRIAL ARTS .....	66	52	30	34	47	40
JUNIOR HIGH SCHOOL(GENERAL) .....	1	2	106	79	...	2
MATHEMATICS .....	220	208	48	65	155	180
MUSIC .....	159	138	27	32	91	68
PHYSICAL & HEALTH EDUCATION .....	423	389	31	111	203	142
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	150	126	52	55	130	123
SUBJECT NOT SPECIFIED .....	19	17	2	3	7	6
GENERAL SCIENCE .....	21	19	21	26	15	15
BIOLOGY .....	86	72	23	23	81	78
CHEMISTRY .....	21	17	3	3	16	16
PHYSICS .....	3	3	3	...	11	8
SOCIAL STUDIES(TOTAL) .....	527	396	157	...	512	435
SUBJECT NOT SPECIFIED .....	484	362	114	...	204	148
HISTORY, GEOGRAPHY .....	40	33	40	...	286	271
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	3	...	3	...	22	16
OTHER SOCIAL STUDIES .....	...	1	...	...	...	...
TRADE, INDUSTRY, TECHNOLOGY .....	9	16	...	3	...	...
OTHER SECONDARY SUBJECTS .....	5	13	1	2	...	...
SECONDARY-SCHOOL TOTAL .....	2,902	2,394	760	504	1,945	1,734
UNGRADED						
SPECIAL EDUCATION .....	90	72	28	22	38	49
LIBRARIAN .....	42	39	...	...	13	13
GUIDANCE COUNSELOR .....	188	142	...	...	14	38
SCHOOL PSYCHOLOGIST .....	...	...	...	...	1	6
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	242	255	...	...	...	...



TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	MASSACHUSETTS		MICHIGAN		MINNESOTA	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	4,080	3,833	5,818	4,226	2,867	3,412
REGULAR INSTRUCTION .....	3,795	3,702	5,583	4,026	2,853	3,375
SELECTED SUBJECTS(TOTAL) .....	285	131	235	200	14	37
ART .....	81	24	101	97	2	8
FOREIGN LANGUAGES .....	28	...	35	29	...	...
MUSIC .....	6	7	67	43	7	18
PHYSICAL & HEALTH EDUCATION ....	170	100	32	31	5	11
SECONDARY SCHOOL						
AGRICULTURE .....	...	...	33	30	41	31
ART .....	75	50	374	258	215	194
BUSINESS EDUCATION .....	211	201	648	493	200	183
DISTRIBUTIVE EDUCATION .....	...	...	54	43	10	11
ENGLISH LANGUAGE ARTS(TOTAL) .....	1,125	982	2,010	1,452	757	743
ENGLISH .....	1,090	926	1,591	1,191	584	590
JOURNALISM .....	...	...	33	25	1	1
SPEECH AND DRAMATIC ARTS .....	35	56	386	236	172	152
FOREIGN LANGUAGES(TOTAL) .....	396	369	494	332	263	285
FRENCH .....	222	222	194	124	97	113
GERMAN .....	22	17	71	54	69	82
LATIN .....	70	71	44	32	7	7
RUSSIAN .....	10	3	20	7	6	7
SPANISH .....	66	48	165	113	83	76
OTHER .....	6	8	...	2	1	...
HOME ECONOMICS .....	129	104	368	235	166	156
INDUSTRIAL ARTS .....	...	...	241	216	188	190
JUNIOR HIGH SCHOOL(GENERAL) .....	8	1	...	1	2	3
MATHEMATICS .....	376	329	648	492	319	311
MUSIC .....	71	93	348	278	276	223
PHYSICAL & HEALTH EDUCATION .....	494	410	788	641	489	439
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	496	350	703	527	304	270
SUBJECT NOT SPECIFIED .....	138	105	6	13	...	2
GENERAL SCIENCE .....	80	43	96	81	68	67
BIOLOGY .....	198	133	456	342	154	140
CHEMISTRY .....	31	32	93	51	54	38
PHYSICS .....	49	37	52	40	28	23
SOCIAL STUDIES(TOTAL) .....	1,167	1,025	2,068	1,680	834	716
SUBJECT NOT SPECIFIED .....	413	384	519	408	202	189
HISTORY, GEOGRAPHY .....	679	584	1,060	872	431	350
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	66	41	362	259	55	53
OTHER SOCIAL STUDIES .....	7	16	127	141	146	124
TRADE, INDUSTRY, TECHNOLOGY .....	1	...	93	87	...	...
OTHER SECONDARY SUBJECTS .....	16	7	128	82	1	1
SECONDARY-SCHOOL TOTAL .....	4,565	3,921	8,998	6,847	4,065	3,756
UNGRADED						
SPECIAL EDUCATION .....	225	237	672	504	212	179
LIBRARIAN .....	1	17	75	63	55	45
GUIDANCE COUNSELOR .....	91	203	...	2	129	111
SCHOOL PSYCHOLOGIST .....	...	...	...	...	...	...
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	11	...	...	...	101	83

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	MISSISSIPPI		MISSOURI		MONTANA	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	1,740	1,406	2,599	2,467	655	634
REGULAR INSTRUCTION .....	1,732	1,390	2,578	2,454	653	633
SELECTED SUBJECTS(TOTAL) .....	8	16	21	13	2	1
ART .....	6	12	3	1	...	...
FOREIGN LANGUAGES .....	...	...	...	3	...	...
MUSIC .....	2	4	4	2	2	1
PHYSICAL & HEALTH EDUCATION ....	...	...	14	7	...	...
SECONDARY SCHOOL						
AGRICULTURE .....	71	53	51	49	6	13
ART .....	70	54	210	181	50	46
BUSINESS EDUCATION .....	407	334	312	271	85	73
DISTRIBUTIVE EDUCATION .....	2	2	6	4	6	6
ENGLISH LANGUAGE ARTS(TOTAL) .....	446	472	899	771	181	160
ENGLISH .....	345	358	746	652	179	157
JOURNALISM .....	14	13	6	7	...	...
SPEECH AND DRAMATIC ARTS .....	87	101	147	112	2	3
FOREIGN LANGUAGES(TOTAL) .....	57	49	193	198	50	53
FRENCH .....	32	21	77	73	20	18
GERMAN .....	...	4	15	11	9	9
LATIN .....	3	...	6	10	2	2
RUSSIAN .....	...	...	...	...	1	2
SPANISH .....	22	24	80	96	18	22
OTHER .....	...	...	15	8	...	...
HOME ECONOMICS .....	184	193	265	224	59	57
INDUSTRIAL ARTS .....	164	104	175	157	13	25
JUNIOR HIGH SCHOOL(GENERAL) .....	...	2	...	...	...	...
MATHEMATICS .....	189	151	271	281	53	58
MUSIC .....	184	144	228	196	41	29
PHYSICAL & HEALTH EDUCATION .....	497	443	681	411	148	125
NATURAL & PHYSICAL SCIENCES (TOTAL) .....	177	138	280	251	93	97
SUBJECT NOT SPECIFIED .....	8	4	6	6	10	11
GENERAL SCIENCE .....	23	33	24	25	27	25
BIOLOGY .....	121	93	208	184	45	48
CHEMISTRY .....	25	7	28	26	9	11
PHYSICS .....	...	1	14	10	2	2
SOCIAL STUDIES(TOTAL) .....	796	550	876	771	225	219
SUBJECT NOT SPECIFIED .....	645	364	454	493	104	104
HISTORY, GEOGRAPHY .....	56	143	298	207	120	103
ECONOMICS, SOCIOLOGY, PSYCHOLOGY .....	76	39	74	51	1	3
OTHER SOCIAL STUDIES .....	19	4	50	20	...	9
TRADE, INDUSTRY, TECHNOLOGY .....	50	23	1	1	...	...
OTHER SECONDARY SUBJECTS .....	...	1	28	26	2	1
SECONDARY-SCHOOL TOTAL .....	3,294	2,713	4,476	3,792	1,012	962
UNGRADED						
SPECIAL EDUCATION .....	99	91	201	149	47	38
LIBRARIAN .....	48	44	85	68	4	3
GUIDANCE COUNSELOR .....	58	52	135	125	33	45
SCHOOL PSYCHOLOGIST .....	38	25	...	...	...	...
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	1	...	...
OTHER UNGRADED .....	...	1	28	48	...	4

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	NEBRASKA		NEVADA		NEW HAMPSHIRE	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	1,762	1,718	173	170	471	453
REGULAR INSTRUCTION .....	1,710	1,680	173	170	460	448
SELECTED SUBJECTS(TOTAL) .....	52	38	...	...	11	5
ART .....	26	20	...	...	7	3
FOREIGN LANGUAGES .....	2	7	...	...	1	1
MUSIC .....	4	4	...	...	3	1
PHYSICAL & HEALTH EDUCATION ....	20	7	...	...	...	...
SECONDARY SCHOOL						
AGRICULTURE .....	43	40	2	...	3	4
ART .....	96	74	12	9	20	23
BUSINESS EDUCATION .....	222	184	14	11	29	35
DISTRIBUTIVE EDUCATION .....	...	9	...	...	...	...
ENGLISH LANGUAGE ARTS(TOTAL) .....	473	395	44	40	110	97
ENGLISH .....	372	316	33	35	110	97
JOURNALISM .....	16	11	...	1	...	...
SPEECH AND DRAMATIC ARTS .....	85	68	11	4	...	...
FOREIGN LANGUAGES(TOTAL) .....	99	98	11	12	38	54
FRENCH .....	37	66	3	5	26	47
GERMAN .....	15	11	1	2	4	2
LATIN .....	2	3	...	...	2	...
RUSSIAN .....	...	...	...	...	...	...
SPANISH .....	43	18	7	5	6	5
OTHER .....	2	...	...	...	...	...
HOME ECONOMICS .....	185	195	6	7	41	37
INDUSTRIAL ARTS .....	126	109	2	...	30	31
JUNIOR HIGH SCHOOL(GENERAL) .....	1	60	...	...	...	...
MATHEMATICS .....	150	170	9	7	64	57
MUSIC .....	147	113	6	7	22	25
PHYSICAL & HEALTH EDUCATION .....	417	302	40	39	115	49
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	165	135	20	23	54	69
SUBJECT NOT SPECIFIED .....	6	12	...	...	3	14
GENERAL SCIENCE .....	30	21	1	2	18	7
BIOLOGY .....	95	75	13	12	33	40
CHEMISTRY .....	25	17	4	2	...	8
PHYSICS .....	9	10	2	7	...	...
SOCIAL STUDIES(TOTAL) .....	436	383	54	55	193	165
SUBJECT NOT SPECIFIED .....	183	175	...	3	102	89
HISTORY, GEOGRAPHY .....	208	161	39	39	69	57
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	31	40	7	8	22	19
OTHER SOCIAL STUDIES .....	14	7	8	5	...	...
TRADE, INDUSTRY, TECHNOLOGY .....	...	...	...	1	...	...
OTHER SECONDARY SUBJECTS .....	27	26	9	2	...	...
SECONDARY-SCHOOL TOTAL .....	2,587	2,293	229	213	719	646
UNGRADED						
SPECIAL EDUCATION .....	31	31	22	17	1	2
LIBRARIAN .....	12	13	1	...	8	5
GUIDANCE COUNSELOR .....	56	52	21	15	...	19
SCHOOL PSYCHOLOGIST .....	...	...	1	1	...	...
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	35	57	...	...	...	19

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	NEW JERSEY		NEW MEXICO		NEW YORK	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	3,063	2,974	349	305	11,400	10,522
REGULAR INSTRUCTION .....	2,994	2,924	347	302	11,069	10,210
SELECTED SUBJECTS(TOTAL) .....	69	50	2	3	331	312
ART .....	30	22	...	...	48	49
FOREIGN LANGUAGES .....	...	...	...	...	39	32
MUSIC .....	39	28	2	3	112	123
PHYSICAL & HEALTH EDUCATION .....	..	...	...	...	132	107
SECONDARY SCHOOL						
AGRICULTURE .....	6	5	13	15	15	15
ART .....	282	230	16	6	853	816
BUSINESS EDUCATION .....	309	260	50	51	412	398
DISTRICTIVE EDUCATION .....	36	20	2	3	64	47
ENGLISH LANGUAGE ARTS(TOTAL) .....	752	703	91	78	2,490	2,369
ENGLISH .....	639	617	82	71	2,121	2,027
JOURNALISM .....	...	...	1	...	138	111
SPEECH AND DRAMATIC ARTS .....	113	86	8	7	231	231
FOREIGN LANGUAGES(TOTAL) .....	341	291	42	34	1,164	1,002
FRENCH .....	146	126	2	7	499	378
GERMAN .....	21	13	...	...	43	82
LATIN .....	17	22	...	...	30	42
RUSSIAN .....	1	...	...	...	16	15
SPANISH .....	152	129	38	25	500	418
OTHER .....	4	1	2	2	76	67
HOME ECONOMICS .....	133	100	26	29	385	353
INDUSTRIAL ARTS .....	208	184	34	22	406	367
JUNIOR HIGH SCHOOL(GENERAL) .....	66	81	...	...	136	163
MATHEMATICS .....	462	413	25	24	1,186	1,077
MUSIC .....	211	185	16	22	504	507
PHYSICAL & HEALTH EDUCATION .....	490	414	103	93	887	766
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	332	313	30	42	846	759
SUBJECT NOT SPECIFIED .....	50	72	2	2	188	131
GENERAL SCIENCE .....	109	153	4	5	77	75
BIOLOGY .....	134	75	21	31	425	396
CHEMISTRY .....	23	6	3	3	109	102
PHYSICS .....	16	7	...	1	47	55
SOCIAL STUDIES(TOTAL) .....	685	667	106	101	2,453	2,202
SUBJECT NOT SPECIFIED .....	401	465	30	53	2,144	1,814
HISTORY, GEOGRAPHY .....	130	74	58	25	216	255
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	1	1	4	2	1	17
OTHER SOCIAL STUDIES .....	153	127	14	21	92	116
TRADE, INDUSTRY, TECHNOLOGY .....	...	...	3	3	2	1
OTHER SECONDARY SUBJECTS .....	45	21	...	...	79	108
SECONDARY-SCHOOL TOTAL .....	4,358	3,887	557	523	11,982	10,950
UNGRADED						
SPECIAL EDUCATION .....	354	346	22	18	495	516
LIBRARIAN .....	1	12	4	3	375	296
GUIDANCE COUNSELOR .....	302	295	25	18	438	472
SCHOOL PSYCHOLOGIST .....	38	24	...	...	130	127
SCHOOL SOCIAL WORKER .....	6	4	...	...	224	112
SCHOOL NURSE .....	80	70	...	...	18	53
OTHER UNGRADED .....	290	263	...	2	384	402

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	NORTH CAROLINA		NORTH DAKOTA		OHIO	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	2,356	2,269	576	610	5,783	6,240
REGULAR INSTRUCTION .....	2,356	2,269	565	599	5,364	5,816
SELECTED SUBJECTS(TOTAL) .....	...	...	11	11	419	424
ART .....	...	...	...	...	100	111
FOREIGN LANGUAGES .....	...	...	...	...	27	1
MUSIC .....	...	...	5	...	105	97
PHYSICAL & HEALTH EDUCATION .....	...	...	6	11	187	215
SECONDARY SCHOOL						
AGRICULTURE .....	47	23	15	14	...	...
ART .....	142	119	48	39	378	348
BUSINESS EDUCATION .....	447	392	207	160	499	432
DISTRIBUTIVE EDUCATION .....	...	...	3	3	24	42
ENGLISH LANGUAGE ARTS(TOTAL) .....	774	721	218	205	2,099	1,846
ENGLISH .....	774	721	177	163	1,771	1,543
JOURNALISM .....	...	...	...	...	3	...
SPEECH AND DRAMATIC ARTS .....	...	...	41	42	325	303
FOREIGN LANGUAGES(TOTAL) .....	216	243	21	19	586	604
FRENCH .....	...	...	8	6	254	263
GERMAN .....	...	...	9	7	69	86
LATIN .....	...	...	...	...	38	41
RUSSIAN .....	...	...	...	...	21	14
SPANISH .....	...	...	4	6	204	199
OTHER .....	216	243	...	...	...	1
HOME ECONOMICS .....	251	205	92	85	447	404
INDUSTRIAL ARTS .....	79	64	22	34	226	189
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	6	1	...	1
MATHEMATICS .....	338	334	130	116	605	539
MUSIC .....	220	177	85	50	449	428
PHYSICAL & HEALTH EDUCATION .....	564	529	228	234	804	699
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	294	251	86	81	704	609
SUBJECT NOT SPECIFIED .....	29	251	3	14	105	130
GENERAL SCIENCE .....	...	...	2	...	98	97
BIOLOGY .....	...	...	68	54	403	295
CHEMISTRY .....	...	...	13	11	74	54
PHYSICS .....	...	...	...	2	24	33
SOCIAL STUDIES(TOTAL) .....	842	760	248	204	1,893	1,731
SUBJECT NOT SPECIFIED .....	842	760	132	104	795	933
HISTORY, GEOGRAPHY .....	...	...	79	65	788	571
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	...	...	37	35	132	83
OTHER SOCIAL STUDIES .....	...	...	...	...	178	144
TRADE, INDUSTRY, TECHNOLOGY .....	115	83	...	...	44	37
OTHER SECONDARY SUBJECTS .....	422	432	2	4	26	32
SECONDARY-SCHOOL TOTAL .....	4,751	4,333	1,411	1,249	8,784	7,941
UNGRADED						
SPECIAL EDUCATION .....	159	142	52	54	469	385
LIBRARIAN .....	62	98	...	...	17	28
GUIDANCE COUNSELOR .....	208	164	...	...	234	253
SCHOOL PSYCHOLOGIST .....	4	1	...	...	84	79
SCHOOL SOCIAL WORKER .....	...	...	...	...	1	1
SCHOOL NURSE .....	...	...	...	...	1	5
OTHER UNGRADED .....	250	234	...	...	101	115

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	OKLAHOMA		OREGON		PENNSYLVANIA	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	1,748	1,899	1,728	1,528	6,444	6,405
REGULAR INSTRUCTION .....	1,626	1,725	1,715	1,518	6,330	6,270
SELECTED SUBJECTS(TOTAL) .....	122	174	13	10	114	135
ART .....	35	45	4	2	33	49
FOREIGN LANGUAGES .....	...	...	...	...	25	44
MUSIC .....	64	69	9	8	25	29
PHYSICAL & HEALTH EDUCATION ....	23	60	...	...	31	13
SECONDARY SCHOOL						
AGRICULTURE .....	106	101	10	7	28	19
ART .....	108	99	135	100	530	473
BUSINESS EDUCATION .....	346	335	107	82	466	448
DISTRIBUTIVE EDUCATION .....	5	3	...	...	24	23
ENGLISH LANGUAGE ARTS(TOTAL) .....	568	617	487	417	1,814	1,797
ENGLISH .....	488	532	390	326	1,750	1,740
JOURNALISM .....	4	5	13	10	...	...
SPEECH AND DRAMATIC ARTS .....	76	80	84	81	64	57
FOREIGN LANGUAGES(TOTAL) .....	94	92	139	117	886	842
FRENCH .....	25	28	46	40	364	339
GERMAN .....	1	1	34	27	121	127
LATIN .....	...	...	...	1	35	23
RUSSIAN .....	...	...	2	1	17	16
SPANISH .....	36	33	57	48	325	310
OTHER .....	30	30	...	...	24	27
HOME ECONOMICS .....	109	137	111	102	455	411
INDUSTRIAL ARTS .....	132	140	25	17	270	230
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	25	20	...	...
MATHEMATICS .....	181	221	122	126	1,107	1,043
MUSIC .....	202	162	116	99	548	516
PHYSICAL & HEALTH EDUCATION .....	255	246	402	258	882	797
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	245	224	138	129	901	838
SUBJECT NOT SPECIFIED .....	144	130	...	...	109	75
GENERAL SCIENCE .....	38	32	49	39	118	117
BIOLOGY .....	53	52	68	75	470	467
CHEMISTRY .....	8	9	18	11	142	134
PHYSICS .....	2	1	3	4	62	45
SOCIAL STUDIES(TOTAL) .....	570	556	417	344	2,206	1,995
SUBJECT NOT SPECIFIED .....	425	384	407	318	1,091	968
HISTORY, GEOGRAPHY .....	80	120	9	25	780	774
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	64	52	1	1	46	24
OTHER SOCIAL STUDIES .....	1	...	...	...	289	229
TRADE, INDUSTRY, TECHNOLOGY .....	86	83	20	18	18	27
OTHER SECONDARY SUBJECTS .....	...	...	...	...	8	20
SECONDARY-SCHOOL TOTAL .....	3,006	3,016	2,254	1,836	10,143	9,479
UNGRADED						
SPECIAL EDUCATION .....	193	216	63	51	551	581
LIBRARIAN .....	56	54	11	9	228	277
GUIDANCE COUNSELOR .....	66	96	25	...	83	137
SCHOOL PSYCHOLOGIST .....	6	4	...	...	1	1
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	1	1	...	...	185	205
OTHER UNGRADED .....	119	111	...	...	120	143



TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	RHODE ISLAND		SOUTH CAROLINA		SOUTH DAKOTA	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	486	492	1,042	922	861	820
REGULAR INSTRUCTION .....	446	460	1,026	912	861	820
SELECTED SUBJECTS(TOTAL) .....	40	32	16	10	...	...
ART .....	40	32	...	...	...	...
FOREIGN LANGUAGES .....	...	...	...	...	...	...
MUSIC .....	...	...	16	10	...	...
PHYSICAL & HEALTH EDUCATION .....	...	...	...	...	...	...
SECONDARY SCHOOL						
AGRICULTURE .....	7	5	24	32	22	21
ART .....	2	4	40	43	62	51
BUSINESS EDUCATION .....	66	61	76	119	155	128
DISTRIBUTIVE EDUCATION .....	2	...	31	3	...	...
ENGLISH LANGUAGE ARTS(TOTAL) .....	143	119	321	340	293	231
ENGLISH .....	143	119	291	316	226	198
JOURNALISM .....	...	...	...	...	4	2
SPEECH AND DRAMATIC ARTS .....	...	...	30	24	63	31
FOREIGN LANGUAGES(TOTAL) .....	78	65	89	79	66	57
FRENCH .....	56	48	35	31	12	9
GERMAN .....	2	1	5	2	33	28
LATIN .....	3	2	2	2	...	...
RUSSIAN .....	...	...	...	...	...	...
SPANISH .....	11	11	21	13	17	20
OTHER .....	6	3	26	31	4	...
HOME ECONOMICS .....	30	33	60	70	64	58
INDUSTRIAL ARTS .....	23	18	11	11	66	58
JUNIOR HIGH SCHOOL(GENERAL) .....	1	2	...	...	...	...
MATHEMATICS .....	51	48	132	131	120	106
MUSIC .....	14	18	67	70	93	82
PHYSICAL & HEALTH EDUCATION .....	50	36	151	168	270	206
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	43	27	130	154	89	82
SUBJECT NOT SPECIFIED .....	8	...	13	8	6	7
GENERAL SCIENCE .....	6	7	26	26	4	2
BIOLOGY .....	29	16	77	104	62	55
CHEMISTRY .....	...	4	11	14	12	17
PHYSICS .....	...	...	3	2	5	1
SOCIAL STUDIES(TOTAL) .....	136	131	366	380	410	326
SUBJECT NOT SPECIFIED .....	66	61	131	154	61	70
HISTORY, GEOGRAPHY .....	70	70	155	143	187	147
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	...	...	38	36	89	53
OTHER SOCIAL STUDIES .....	...	...	42	47	73	56
TRADE, INDUSTRY, TECHNOLOGY .....	...	...	3	2	20	15
OTHER SECONDARY SUBJECTS .....	...	...	...	30	1	...
SECONDARY-SCHOOL TOTAL .....	646	567	1,501	1,632	1,731	1,421
UNGRADED						
SPECIAL EDUCATION .....	3	13	70	58	41	49
LIBRARIAN .....	...	20	27	28	1	5
GUIDANCE COUNSELOR .....	10	21	17	12	84	57
SCHOOL PSYCHOLOGIST .....	...	...	...	...	...	...
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	5	5	...	...	...	...
OTHER UNGRADED .....	...	...	15	3	...	...

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	TENNESSEE		TEXAS		UTAH	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	1,918	1,831	6,846	6,440	1,103	1,100
REGULAR INSTRUCTION .....	1,918	1,831	5,775	5,529	1,103	1,100
SELECTED SUBJECTS(TOTAL) .....	...	...	1,071	911	...	...
ART .....	...	...	291	243	...	...
FOREIGN LANGUAGES .....	...	...	...	...	...	...
MUSIC .....	...	...	377	378	...	...
PHYSICAL & HEALTH EDUCATION ....	...	...	403	290	...	...
SECONDARY SCHOOL						
AGRICULTURE .....	35	16	251	224	12	14
ART .....	69	60	159	110	51	50
BUSINESS EDUCATION .....	345	302	832	680	115	114
DISTRIBUTIVE EDUCATION .....	...	...	...	...	20	16
ENGLISH LANGUAGE ARTS(TOTAL) .....	718	692	2,102	1,691	346	327
ENGLISH .....	659	642	1,570	1,274	241	242
JOURNALISM .....	...	...	111	96	7	5
SPEECH AND DRAMATIC ARTS .....	59	50	421	321	98	80
FOREIGN LANGUAGES(TOTAL) .....	138	129	688	495	139	111
FRENCH .....	58	53	136	114	43	35
GERMAN .....	4	1	56	38	30	24
LATIN .....	9	8	37	23	4	3
RUSSIAN .....	...	1	...	...	4	2
SPANISH .....	61	62	455	314	58	47
OTHER .....	6	4	4	6	...	...
HOME ECONOMICS .....	263	257	622	539	179	158
INDUSTRIAL ARTS .....	56	49	280	228	118	100
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	...	...	...	...
MATHEMATICS .....	243	199	646	509	68	56
MUSIC .....	219	191	170	77	85	77
PHYSICAL & HEALTH EDUCATION .....	544	460	944	750	258	219
NATURAL & PHYSICAL SCIENCES (TOTAL) .....	419	405	764	519	99	95
SUBJECT NOT SPECIFIED .....	...	...	209	141	5	5
GENERAL SCIENCE .....	91	71	...	...	26	22
BIOLOGY .....	242	248	435	299	53	58
CHEMISTRY .....	59	62	88	68	7	4
PHYSICS .....	27	24	32	11	8	6
SOCIAL STUDIES(TOTAL) .....	1,177	1,103	1,696	1,407	313	269
SUBJECT NOT SPECIFIED .....	197	199	441	335	1	4
HISTORY, GEOGRAPHY .....	608	559	982	848	154	124
ECONOMICS, SOCIOLOGY, PSYCHOLOGY .....	323	303	36	14	129	108
OTHER SOCIAL STUDIES .....	49	42	237	210	29	33
TRADE, INDUSTRY, TECHNOLOGY .....	5	6	...	...	2	3
OTHER SECONDARY SUBJECTS .....	98	92	158	173	...	...
SECONDARY-SCHOOL TOTAL .....	4,329	3,961	9,312	7,402	1,805	1,609
UNGRADED						
SPECIAL EDUCATION .....	50	39	625	713	61	120
LIBRARIAN .....	22	20	137	138	14	11
GUIDANCE COUNSELOR .....	43	40	...	...	42	71
SCHOOL PSYCHOLOGIST .....	...	...	...	...	9	15
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	1
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	50	35	4	4	37	40

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	VERMONT		VIRGINIA		WASHINGTON	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	300	281	1,513	1,479	2,486	2,041
REGULAR INSTRUCTION .....	298	277	1,492	1,454	2,139	1,730
SELECTED SUBJECTS(TOTAL) .....	2	4	21	25	347	311
ART .....	2	2	9	14	96	100
FOREIGN LANGUAGES .....	...	...	9	2	104	60
MUSIC .....	...	2	3	6	96	101
PHYSICAL & HEALTH EDUCATION .....	...	...	...	3	51	50
SECONDARY SCHOOL						
AGRICULTURE .....	12	19	45	51	11	13
ART .....	...	...	122	100	181	141
BUSINESS EDUCATION .....	28	21	199	188	160	143
DISTRIBUTIVE EDUCATION .....	...	...	76	71	15	...
ENGLISH LANGUAGE ARTS(TOTAL) .....	86	72	492	459	1,080	626
ENGLISH .....	85	72	470	438	939	543
JOURNALISM .....	...	...	2	...	23	4
SPEECH AND DRAMATIC ARTS .....	1	...	20	21	118	79
FOREIGN LANGUAGES(TOTAL) .....	14	14	168	160	195	188
FRENCH .....	9	11	79	75	68	46
GERMAN .....	2	...	6	8	44	30
LATIN .....	...	2	17	13	5	3
RUSSIAN .....	2	...	...	...	9	5
SPANISH .....	1	1	66	64	67	41
OTHER .....	...	...	...	...	2	63
HOME ECONOMICS .....	12	14	116	134	234	217
INDUSTRIAL ARTS .....	...	...	47	45	95	78
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	...	...	...	...
MATHEMATICS .....	22	29	200	186	161	156
MUSIC .....	6	7	133	126	147	113
PHYSICAL & HEALTH EDUCATION .....	28	13	308	248	387	377
NATURAL & PHYSICAL SCIENCES (TOTAL) .....	26	31	170	156	336	190
SUBJECT NOT SPECIFIED .....	4	9	14	6	117	55
GENERAL SCIENCE .....	9	8	16	19	23	14
BIOLOGY .....	10	10	117	108	146	94
CHEMISTRY .....	2	2	17	19	32	20
PHYSICS .....	1	2	6	4	18	7
SOCIAL STUDIES(TOTAL) .....	95	79	563	515	1,004	546
SUBJECT NOT SPECIFIED .....	51	52	81	105	417	...
HISTORY, GEOGRAPHY .....	32	22	344	310	357	220
ECONOMICS, SOCIOLOGY, PSYCHOLOGY .....	9	3	42	34	93	44
OTHER SOCIAL STUDIES .....	3	2	96	66	137	282
TRADE, INDUSTRY, TECHNOLOGY .....	...	...	47	29	8	8
OTHER SECONDARY SUBJECTS .....	2	1	1	...	...	...
SECONDARY-SCHOOL TOTAL .....	331	300	2,687	2,468	4,014	2,796
UNGRADED						
SPECIAL EDUCATION .....	17	7	136	97	82	121
LIBRARIAN .....	...	...	65	80	4	4
GUIDANCE COUNSELOR .....	1	...	75	61	...	...
SCHOOL PSYCHOLOGIST .....	...	...	...	...	...	...
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	13
SCHOOL NURSE .....	...	...	...	1	...	41
OTHER UNGRADED .....	9	...	75	23	93	96

TABLE A. -- NUMBER OF STUDENTS COMPLETING PREPARATION FOR STANDARD TEACHING  
CERTIFICATES, BY TYPE OF PREPARATION, YEAR, AND STATE (CONTINUED)

TYPE OF PREPARATION COMPLETED BY STUDENT	WEST VIRGINIA		WISCONSIN		WYOMING	
	1970	1969	1970	1969	1970	1969
ELEMENTARY-SCHOOL TOTAL .....	1,035	899	2,844	2,795	161	130
REGULAR INSTRUCTION .....	1,035	899	2,741	2,712	161	130
SELECTED SUBJECTS(TOTAL) .....	...	...	103	83	...	...
ART .....	...	...	35	26	...	...
FOREIGN LANGUAGES .....	...	...	4	1	...	...
MUSIC .....	...	...	45	37	...	...
PHYSICAL & HEALTH EDUCATION .....	...	...	19	19	...	...
SECONDARY SCHOOL						
AGRICULTURE .....	11	14	73	65	17	9
ART .....	71	54	258	220	16	15
BUSINESS EDUCATION .....	137	127	140	134	23	12
DISTRIBUTIVE EDUCATION .....	4	7	13	...	1	5
ENGLISH LANGUAGE ARTS(TOTAL) .....	391	348	766	756	69	45
ENGLISH .....	327	290	648	643	55	40
JOURNALISM .....	11	6	5	4	...	...
SPEECH AND DRAMATIC ARTS .....	53	52	113	109	14	5
FOREIGN LANGUAGES(TOTAL) .....	56	65	313	293	16	12
FRENCH .....	30	41	137	124	4	2
GERMAN .....	2	1	47	33	5	2
LATIN .....	3	6	12	18	...	...
RUSSIAN .....	1	...	3	8	...	...
SPANISH .....	20	17	112	108	7	8
OTHER .....	...	...	2	2	...	...
HOME ECONOMICS .....	177	148	297	239	18	15
INDUSTRIAL ARTS .....	57	64	285	258	21	17
JUNIOR HIGH SCHOOL(GENERAL) .....	...	...	12	18	10	7
MATHEMATICS .....	129	115	283	265	19	14
MUSIC .....	143	122	211	193	11	11
PHYSICAL & HEALTH EDUCATION .....	417	353	468	370	28	31
NATURAL & PHYSICAL SCIENCES						
(TOTAL) .....	160	146	332	313	22	21
SUBJECT NOT SPECIFIED .....	1	...	13	16	2	1
GENERAL SCIENCE .....	7	3	49	38	...	...
BIOLOGY .....	118	121	212	202	18	20
CHEMISTRY .....	21	16	44	43	...	...
PHYSICS .....	13	6	14	14	2	...
SOCIAL STUDIES(TOTAL) .....	516	424	864	624	56	37
SUBJECT NOT SPECIFIED .....	514	419	155	131	55	37
HISTORY, GEOGRAPHY .....	2	5	526	386	...	...
ECONOMICS, SOCIOLOGY,						
PSYCHOLOGY .....	...	...	98	54	1	...
OTHER SOCIAL STUDIES .....	...	...	85	53	...	...
TRADE, INDUSTRY, TECHNOLOGY .....	...	...	41	38	...	...
OTHER SECONDARY SUBJECTS .....	...	...	39	50	...	...
SECONDARY-SCHOOL TOTAL .....	2,269	1,987	4,395	3,836	327	251
UNGRADED						
SPECIAL EDUCATION .....	44	32	249	250	8	14
LIBRARIAN .....	4	7	92	73	...	1
GUIDANCE COUNSELOR .....	...	...	84	66	...	1
SCHOOL PSYCHOLOGIST .....	...	...	15	9	...	...
SCHOOL SOCIAL WORKER .....	...	...	...	...	...	...
SCHOOL NURSE .....	...	...	...	...	...	...
OTHER UNGRADED .....	...	...	48	84	...	...

TABLE B.--LOW, MEDIAN, HIGH, AND MEAN PERCENTS OF TEACHERS  
WHO WERE NEW IN 19 STATES, 1969-70

Assignment	Low	Median	High	Mean	Number of states reporting
1	2	3	4	5	6
<b>ELEMENTARY</b>					
Regular instruction .....	5.2%	12.9%	35.7%	17.1%	19
Art .....	7.1	22.4	29.5	18.9	13
Foreign languages .....	0.0	14.3	40.0	11.0	11
Music .....	3.7	15.8	37.3	19.0	14
Physical and health education .....	10.0	13.1	57.0	27.0	14
Special education .....	2.8	13.3	21.8	16.3	15
<b>SECONDARY</b>					
Agriculture .....	0.0	9.6	27.0	13.4	18
Art .....	1.5	16.0	45.0	21.7	19
Business education .....	6.2	11.2	32.3	16.6	19
Distributive education .....	0.0	16.8	55.6	14.7	15
English languages arts .....	9.8	16.6	39.7	20.9	19
Foreign languages .....	8.8	16.5	43.0	21.8	19
Home economics .....	6.8	12.6	35.3	16.9	19
Industrial arts .....	6.1	12.0	30.7	16.2	19
Junior high school .....	0.0	15.2	37.5	34.6	7
Mathematics .....	5.7	14.2	38.2	17.5	19
Music .....	2.3	13.0	44.0	17.1	19
Physical and health education .....	5.7	12.8	36.1	17.5	19
Men .....	6.4	11.0	17.3	11.7	6
Women .....	6.9	12.8	25.1	16.0	6
Natural and physical sciences .....	5.1	15.4	38.4	18.4	15
Social studies .....	6.3	12.6	34.5	15.3	19
Trade, industrial, vocational, technical .....	3.1	10.0	22.6	13.9	17
Special education .....	6.7	16.7	39.1	17.4	17
Other secondary subjects .....	0.0	9.0	12.9	11.2	8
<b>LIBRARIAN</b>					
Elementary .....	0.0	8.7	52.4	9.1	15
Secondary .....	4.4	10.7	40.2	10.6	15
<b>GUIDANCE COUNSELOR</b>					
Elementary .....	3.6	7.1	30.8	8.0	15
Secondary .....	1.5	3.3	8.9	4.0	17

TABLE C.--LOW, MEDIAN, HIGH, AND MEAN PERCENTS OF NEW TEACHERS WHO WERE  
RE-ENTERING CLASSROOMS FOLLOWING AN INTERRUPTION OF AT LEAST  
ONE YEAR, IN 18 STATES, 1969-70

Assignment	Low	Median	High	Mean	Number of states reporting
1	2	3	4	5	6
<b>ELEMENTARY</b>					
Regular instruction .....	7.0%	26.2%	79.5%	47.0%	18
Art .....	0.0	25.9	100.0	31.6	14
Foreign languages .....	0.0	0.0	100.0	30.0	9
Music .....	10.0	39.1	81.2	59.2	15
Physical and health education .....	0.0	17.1	79.0	45.6	15
Special education .....	5.1	27.5	87.1	37.0	16
<b>SECONDARY</b>					
Agriculture .....	0.0	27.8	100.0	42.3	15
Art .....	2.6	20.0	100.0	28.9	18
Business education .....	0.0	18.5	74.9	41.5	18
Distributive education .....	0.0	21.1	100.0	31.9	12
English language arts .....	8.1	20.0	77.8	36.9	18
Foreign languages .....	10.3	21.9	76.5	39.5	18
Home economics .....	10.0	26.4	77.0	43.6	18
Industrial arts .....	0.0	18.4	74.2	40.8	18
Junior high school .....	6.1	29.1	75.8	71.2	10
Mathematics .....	3.4	19.2	74.4	33.8	18
Music .....	7.1	28.2	89.6	39.0	18
Physical and health education .....	4.9	20.2	76.9	40.2	18
Men .....	5.7	22.3	79.7	50.9	11
Women .....	9.8	31.4	67.9	37.1	11
Natural and physical sciences .....	3.6	27.6	78.3	36.5	15
Social studies .....	5.9	14.8	74.4	30.4	18
Trade, industrial, vocational, technical .....	0.0	19.1	100.0	33.3	16
Special education .....	6.1	25.0	83.3	29.1	17
Other secondary subjects .....	10.0	34.7	100.0	37.3	7
<b>LIBRARIAN</b>					
Elementary .....	0.0	50.0	100.0	53.9	15
Secondary .....	2.9	42.1	69.0	42.1	17
<b>GUIDANCE COUNSELOR</b>					
Elementary .....	0.0	41.2	100.0	57.1	15
Secondary .....	30.0	71.9	100.0	72.4	16



TABLE D.—RESPONSES TO THE SPECIAL SURVEY OF TEACHER SUPPLY AND DEMAND  
IN SUMMER 1970, BY STATE

State	Applicants compared with teaching position vacancies			Comparison with conditions last year						
	Some short- age	Sufficient ap- plicants to fill positions	Shortage in some sub- jects	Some ex- cess	Substantial excess	Much more acute	More acute	About the same	Less acute	Much less acute
1	2	3	4	5	6	7	8	9	10	11
Alabama .....			X						X	
Alaska .....										X
Arizona .....					X					
Arkansas .....			X					X		
California .....			X							X
Colorado .....					X					
Connecticut .....			X						X	
Delaware .....			X						X	
Florida .....			X						X	
Georgia .....			X						X	
Hawaii .....	X		X					X		
Idaho .....			X						X	
Illinois .....			X							X
Indiana .....		X	X						X	
Iowa .....		X	X						X	
Kansas .....		X	X						X	
Kentucky .....			X						X	
Louisiana .....			X						X	
Maine .....			X					X		
Maryland .....			X					X		
Massachusetts .....			X						X	
Michigan .....		X							X	
Minnesota .....			X						X	
Mississippi .....			X						X	
Missouri .....			X						X	
Montana .....			X						X	
Nebraska .....			X						X	
Nevada .....		X								X
New Hampshire .....			X							
New Jersey .....			X						X	
New Mexico .....			X						X	
New York .....			X							X
North Carolina .....			X						X	
North Dakota .....			X						X	
Ohio .....			X						X	
Oklahoma .....			X						X	
Oregon .....			X						X	
Pennsylvania .....			X						X	
Rhode Island .....			X						X	
South Carolina .....			X						X	
South Dakota .....			X						X	
Tennessee .....			X						X	
Texas .....			X						X	
Utah .....			X						X	
Vermont .....			X						X	
Virginia .....			X						X	
Washington .....			X						X	
West Virginia .....			X						X	
Wisconsin .....			X						X	
Wyoming .....			X						X	
Total number of states .....	2	7	35	1	4	1	1	7	31	8

(Information not available)

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 TENNESSEE--A. B. Cooper, State Department of Education  
 TEXAS--Waurine Walker, Texas Education Agency  
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